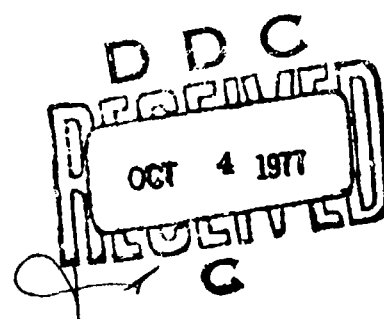


DEPARTMENT OF DEFENSE  
IN-HOUSE RDT&E ACTIVITIES

AD A 045005



30 OCTOBER 1976

Management Analysis Report . . .

Department of the Army

Department of the Navy

Department of the Air Force

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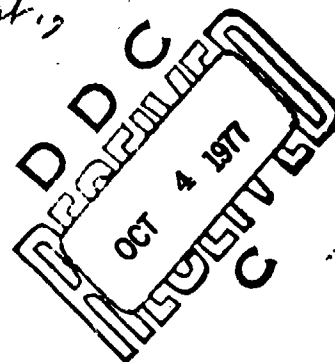
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*(11)* 30 Oct ~~1976~~ 1976

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Prepared For:  
US ARMY MATERIEL DEVELOPMENT AND READINESS COMMAND  
5001 Eisenhower Avenue  
Alexandria, Virginia 22333

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FOREWORD

THIS REPORT WAS PREPARED BY SCIENCE APPLICATIONS, INC., McLEAN, VIRGINIA, FOR THE US ARMY MATERIEL DEVELOPMENT AND READINESS COMMAND AT THE DIRECTION OF THE CHIEF, RESEARCH, DEVELOPMENT AND ACQUISITION. THIS EDITION IS THE ELEVENTH OF A SERIES THAT WAS INITIATED IN 1966.

EACH IN-HOUSE RDT&E ACTIVITY OF THE DEPARTMENT OF DEFENSE IS DESCRIBED ON ONE PAGE IN THIS COMPILATION. THE DATA FOR 1976 ARE SUMMARIZED IN TABLES PRECEDING THE MAIN TEXT AND CHARTS AND TABLES ARE PROVIDED FOR EACH SERVICE SHOWING ORGANIZATIONAL RELATIONSHIPS AND COMMAND CHAINS.

ALL CURRENT DOD RDT&E ACTIVITIES WHICH MEET THE REPORT REQUIREMENT OF HAVING AT LEAST 25 PER CENT OF THEIR BUDGET IN RDT&E FUNDS ARE LISTED IN THE CONTENTS ALPHABETICALLY WITHIN EACH DEPARTMENT. SOME OF THE FACILITIES WHICH DO NOT MEET THE REQUIREMENT PREVIOUSLY NOTED ARE ALSO LISTED BY SPECIAL REQUEST. ORGANIZATIONAL CHANGES DURING FY 1976 APPEAR IN APPENDIX I.

APPENDIX II CONTAINS THE DEFINITIONS GIVEN IN DOD INSTRUCTION 7700.9 (DEPARTMENT OF THE ARMY LETTER, "RESEARCH AND DEVELOPMENT RESOURCE DATA FOR IN-HOUSE RDT&E ACTIVITIES," DATED 6 AUGUST 1973) AND EMPLOYED AS THE DIRECTIVE FOR THESE DATA. THIS LETTER WILL BE REPLACED BY A REGULATION IN FY 1977 WHICH WILL BE USED BY ALL SERVICES AS THE BASIS FOR DATA SUBMISSION FOR THIS REPORT. APPENDIX III LISTS SELECTED ABBREVIATIONS AND ACRONYMS. APPENDIX IV LISTS SELECTED KEY WORDS WITH PAGE REFERENCES.

EVERY EFFORT HAS BEEN MADE TO PROVIDE ACCURATE INFORMATION, PARTICULARLY FISCAL DATA. ALL NUMBERS AND STATEMENTS HAVE BEEN THOROUGHLY EXAMINED AND WHERE NECESSARY, REVIEWED WITH THE SUBMITTING AGENCY TO INSURE CORRECTNESS AND CLARITY.

SINCERE APPRECIATION IS EXTENDED TO MR. WILLIAM A. STRAIN AND HIS ASSOCIATES OF THE US ARMY MANAGEMENT SYSTEMS SUPPORT AGENCY FOR THEIR EFFORTS AND ASSISTANCE IN PROVIDING A COMPUTER PRINTOUT FROM WHICH THIS REPORT IS PRINTED.

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# SUMMARY

## DEPARTMENT OF DEFENSE IN-HOUSE RDT&E FACILITIES

### PROGRAM DATA FOR FY 1976

	(MILLIONS)
TOTAL ANNUAL PROGRAM	5454.921
TOTAL INHOUSE PROGRAM	2854.142
TOTAL RDT&E PROGRAM	3229.652
TOTAL INHOUSE RDT&E	1770.838
TOTAL ANNUAL OPERATING COST	891.354

### PERSONNEL DATA (END OF FY 1976)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHD	TOTAL PROFESSIONALS
MILITARY	23867	900	6711
CIVILIAN	76574	3436	29671
TOTAL	100441	4336	36382

### PHYSICAL FACILITIES (END OF FY 1976)

ACRES	9277338
-------	---------

#### SPACE (THOUSANDS OF SQ FT)

LABORATORY	26659.371
ADMINISTRATIVE	10434.500
OTHER	60800.432
TOTAL	97894.303

#### COST (MILLIONS)

REAL PROPERTY	3910.619
EQUIPMENT	3276.617
TOTAL	7187.236



TABLE 1. ARMY ROTEE ACTIVITIES, PROGRAM AND PERSONNEL DATA, FY 1976

INSTALLATION	FUNDING DATA (MILLIONS \$)				PERSONNEL DATA									
	TOTAL	INHOUSE	RDTEE	RDTEE	TOTAL	PHD	PHD	PHD	PHD	PHD	PHD	PHD	PHD	PROF
AEROMEDICAL RESEARCH LABORATORY	3.365	3.365	2.303	2.303	58	57	17	6	23	17	17	17	17	17
AIR DEFENSE BOARD	4.792	4.792	2.477	2.477	120	87	0	0	26	12	12	12	12	12
AIR MOBILITY R&D LABORATORY	48.444	13.950	47.542	13.950	27	586	2	28	1	29	11	276	276	276
AIRBORNE COMMUNICATIONS & ELECTRONICS BOARD	4.049	4.049	1.708	1.708	122	52	0	1	29	11	29	11	29	11
ARCTIC TEST CENTER	6.081	6.081	3.177	3.177	269	22	0	0	60	9	60	9	60	9
ARMOF AND ENGINEER BOARD	8.226	8.226	1.967	1.967	181	85	0	1	176	11	176	11	176	11
ATMOSPHERIC SCIENCES LABORATORY	13.174	10.688	13.073	10.688	440	225	0	14	22	104	22	104	22	104
AVIATION ENGINEERING FLIGHT ACTIVITY	4.030	4.030	4.030	4.030	56	104	0	0	30	34	34	34	34	34
AVIATION TEST BOARD	6.141	5.931	6.141	5.931	76	36	0	1	20	7	20	7	20	7
AVIONICS LABORATORY	16.084	11.382	10.605	7.195	12	183	0	4	6	129	6	129	6	129
BALLISTICS RESEARCH LABORATORIES	41.410	30.405	38.033	27.545	27	777	0	107	42	439	42	439	42	439
BENET WEAPONS LABORATORY	16.885	13.922	10.093	7.130	5	377	0	41	5	178	41	5	178	41
COLD REGIONS REE LABORATORY	9.106	6.803	6.090	4.748	13	276	0	26	7	98	26	7	98	26
COMBAT SURVEILLANCE & TEST ACQUISITION LABS	32.746	14.839	28.077	12.303	11	240	0	12	9	153	12	9	153	12
COMMUNICATIONS ADP LABORATORY	23.360	19.092	18.185	14.977	12	361	1	16	7	255	16	7	255	16
CONSTRUCTION ENGINEERING RESEARCH LABORATORY	14.997	12.132	13.107	11.183	3	209	0	27	3	108	27	3	108	27
DUGWAY PROVING GROUND	19.557	16.844	11.718	9.849	173	636	3	17	33	175	33	175	33	175
EDGEWOOD ARSENAL LABORATORIES	65.680	60.537	48.651	43.508	126	824	30	55	82	460	55	82	460	55
ELECTRONIC PROVING GROUND	11.463	10.275	4.534	4.032	323	193	2	2	37	68	2	37	68	2
ELECTRONIC WARFARE LABORATORY	88.844	22.478	49.774	18.140	60	434	0	9	3	235	9	3	235	9
ELECTRONICS TECHNOLOGY AND DEVICES LAB	23.023	12.645	21.202	11.044	4	340	0	37	4	220	37	4	220	37
ENGINEER TECHNOLOGICAL LABORATORIES	15.663	7.143	15.375	6.855	16	261	1	20	11	164	20	11	164	20
ENGINEER WATERWAYS EXPERIMENT STATION	47.253	37.224	12.386	10.803	39	1350	3	80	26	463	80	26	463	80
FIELD ARTILLERY 97AFU	2.753	2.753	0.771	0.771	211	35	0	0	42	4	42	4	42	4
FRANKFORD ARSENAL LABORATORIES	194.635	73.536	23.535	17.036	10	1079	0	33	10	559	33	10	559	33
HARRY DIAMOND LABORATORIES	142.939	40.452	65.282	30.033	10	1399	3	72	10	510	72	10	510	72
HUMAN ENGINEERING LABORATORY	7.872	5.722	7.198	4.071	30	141	1	18	11	89	18	11	89	18
INFANTRY BOARD	3.144	3.144	1.207	1.207	109	50	0	0	7	4	7	4	7	4
INSTITUTE OF DENTAL RESEARCH	1.940	1.940	0.827	0.827	62	26	23	2	45	7	23	2	45	7
INSTITUTE OF SURGICAL RESEARCH	3.553	3.553	1.635	1.635	136	78	19	3	21	7	19	3	21	7
KWAJALEIN MISSILE RANGE/MARSHALL ISLANDS	89.966	4.657	89.271	3.962	29	115	0	0	12	43	0	12	43	0
LETTERMAN ARMY INSTITUTE OF RESEARCH	9.097	9.097	6.227	6.227	260	201	20	18	102	61	20	18	102	61
MATERIAL SYSTEMS ANALYSIS AGENCY	19.509	13.180	17.406	11.673	29	418	0	15	21	316	15	21	316	15
MATERIALS AND MECHANICS RESEARCH CENTER	32.309	19.402	22.486	13.801	16	641	2	64	7	204	64	7	204	64
MATERIEL TESTING DIRECTORATE	35.481	35.110	25.548	25.258	265	954	1	5	31	194	5	31	194	5
MEDICAL BIOENGINEERING R&D LABORATORY	3.429	3.429	2.836	2.836	27	81	10	12	27	34	10	12	27	34
MEDICAL RESEARCH INST OF INFECTIOUS DISEASES	10.317	10.317	7.207	7.207	315	198	48	24	56	63	48	24	56	63
MISSILE RES., DEV. AND ENGINEERING LAB	110.868	57.551	88.523	38.599	36	1243	1	83	28	768	83	28	768	83
MOBILITY EQUIPMENT R&D COMMAND	97.461	38.310	51.995	22.273	68	1207	2	21	34	429	21	34	429	21
MOBILITY SYSTEMS LABORATORY	49.381	22.288	26.870	10.742	37	838	1	10	14	276	10	14	276	10
NIGHT VISION LABORATORY	40.954	17.512	40.954	17.512	104	1152	5	93	22	463	93	22	463	93
PICATINNY ARSENAL LABORATORIES	134.241	86.194	85.400	43.400	28	410	0	31	7	207	31	7	207	31
R&D TECHNICAL SUPPORT ACTIVITY	11.990	11.665	10.120	9.885	84	4174	0	63	16	1603	63	16	1603	63
RESEARCH INST FOR BEHAVIORAL & SOCIAL SCI	19.667	8.123	19.667	8.123	36	233	1	123	40	183	123	40	183	123
RESEARCH INSTITUTE OF ENVIRONMENTAL MEDICINE	4.590	4.590	3.540	3.540	82	80	16	20	57	37	16	20	57	37
TROPIC TEST CENTER	4.991	4.683	2.296	2.151	77	62	0	5	14	18	5	14	18	5
WALTER REED ARMY INSTITUTE OF RESEARCH	23.568	23.568	15.146	15.146	456	500	131	63	430	511	131	63	430	511
WHITE SANDS MISSILE RANGE	119.647	90.577	103.815	80.936	931	3857	0	47	382	1006	47	382	1006	47
YUMA PROVING GROUND	33.464	31.167	19.126	19.126	383	875	0	0	65	102	0	0	65	102
TOTALS	1775.455	989.787	1134.388	650.261	6007	28243	343	1330	2189	11412	343	1330	2189	11412

X

TABLE 2. ARMY ROTEE FACILITIES DATA, FY 1976

INSTALLATION	ACRES	LABORATORY	ADMIN	OTHER	SPACE (THOUSANDS OF SQUARE FEET)		COST (MILLIONS \$)	
							REAL	PROPERTY EQUIPMENT
AEROMEDICAL RESEARCH LABORATORY	10	52,747	7,797	30,772	0.884	7.400		
AIR DEFENSE BOARD	26	36,550	36,646	30,114	1.895	8,218		
AIR MOBILITY R&D LABORATORY	108	85,014	43,308	15,584	1.674	5,470		
AIRBORNE COMMUNICATIONS & ELECTRONICS BOARD	27	3,978	39,340	0.971	12,474	5,699		
AFCTIC TEST CENTER	647155	5,100	120,079	170,152	1.419	2,345		
ARMOR AND ENGINEER BOARD	6900	6,200	54,455	151,508	48,000	22,000		
ATMOSPHERIC SCIENCES LABORATORY	45	51,000	3,100	3,600	3,614	6,629		
AVIATION ENGINEERING FLIGHT ACTIVITY	19	4,280	32,830	98,490	2,623	19,286		
AVIATION TEST BOARD	1189	2,440	50,584	177,364	0.000	12,139		
AVIONICS LABORATORY	0	25,742	30,108	0.000	40,462	29,998		
BALLISTICS RESEARCH LABORATORIES	1920	537,424	20,103	34,157	4,018	6,663		
BENET WEAPONS LABORATORY	4	167,463	24,600	7,480	4,789	6,278		
COLD REGIONS R&E LABORATORY	24	17,230	6,168	97,646	3,950	15,848		
COMBAT SURVEILLANCE & TGT ACQUISITION LABS	227	89,475	6,139	12,569	0.000	12,019		
COMMUNICATIONS ADP LABORATORY	0	41,000	48,000	1,000	3,896	4,067		
CONSTRUCTION ENGINEERING RESEARCH LABORATORY	30	76,281	34,159	0.000	51,237	16,096		
DUGWAY PROVING GROUND	940909	90,728	191,558	1680,346	17,103	13,494		
EDGEWOOD ARSENAL LABORATORIES	2000	501,312	124,180	98,595	2,468	43,204		
ELECTRONIC PROVING GROUND	42800	0.000	55,518	120,803	0.000	47,870		
ELECTRONIC WARFARE LABORATORY	0	142,936	13,817	49,502	0.000	10,931		
ELECTRONICS TECHNOLOGY AND DEVICES LAB	0	95,617	10,575	25,936	6,000	11,000		
ENGINEER TOPOGRAPHIC LABORATORIES	33	90,722	7,000	19,280	17,211	29,096		
ENGINEER WATERWAYS EXPERIMENT STATION	2092	1665,220	330,304	170,806	3,330	1,260		
FIELD ARTILLERY BOARD	23	28,100	32,802	17,640	16,960	12,549		
FRANKFORD ARSENAL LABORATORIES	43	577,421	149,872	425,050	33,854	28,991		
MARKY DIAMOND LABORATORIES	2830	277,944	177,399	307,789	0.761	3,250		
HUMAN ENGINEERING LABORATORY	10	30,776	19,352	29,538	0.900	0,357		
INFANTRY BOARD	10	0.000	39,237	66,133	0.853	1,118		
INSTITUTE OF DENTAL RESEARCH	4	9,325	5,696	6,730	2,013	1,681		
INSTITUTE OF SURGICAL RESEARCH	1	26,424	1,800	27,408	233,788	133,239		
KWAJALEIN MISSILE RANGE/MARSHALL ISLANDS	1491	9,000	210,232	2624,077	42,449	9,048		
LETTERMAN ARMY INSTITUTE OF RESEARCH	5	119,520	116,792	103,984	2,308	0,360		
MATERIAL SYSTEMS ANALYSIS AGENCY	3	13,083	91,994	1,715	15,726	15,962		
MATERIALS AND MECHANICS RESEARCH CENTER	48	389,161	96,018	169,979	18,000	29,000		
MATERIEL TESTING DIRECTORATE	25048	694,300	4,331	296,170	2,918	2,157		
MEDICAL BIOENGINEERING R&D LABORATORY	5	44,325	27,300	35,631	17,824	3,900		
MEDICAL RESEARCH INST OF INFECTIOUS DISEASES	43	80,854	19,820	209,699	32,900	75,000		
MISSILE RES. DEV. AND ENGINEERING LAB	11000	1175,000	262,000	408,000	49,542	30,000		
MOBILITY EQUIPMENT R&D COMMAND	1064	693,649	115,530	194,279	20,970	7,500		
MOBILITY SYSTEMS LABORATORY	43	458,558	126,433	62,644	25,878	15,656		
NATICK R&D COMMAND	2994	550,562	65,900	412,268	43,961	40,905		
NIGHT VISION LABORATORY	21	73,261	3,521	67,207	76,363	58,573		
PICATINNY ARSENAL LABORATORIES	5852	619,590	612,391	2643,053	33,988	6,523		
R&D TECHNICAL SUPPORT ACTIVITY	136	17,826	34,599	77,415	0.000	1,708		
RESEARCH INST FOR BEHAVIORAL & SOCIAL SCI	0	42,000	8,000	4,000	3,663	2,695		
RESEARCH INSTITUTE OF ENVIRONMENTAL MEDICINE	4	60,421	18,563	28,647	1,033	1,699		
TRCPC TEST CENTER	19866	18,782	30,050	97,310	9,165	15,224		
WALTER REED ARMY INSTITUTE OF RESEARCH	206	382,494	58,369	0.000	176,983	168,046		
WHITE SANDS MISSILE RANGE	4214377	1430,159	436,105	2848,369	44,136	73,881		
YUMA PROVING GROUND	870365	92,868	98,754	1210,338	1133,854	1081,472		
TOTALS	6700010	11693,872	4152,290	15736,866				

TABLE 3. NAVY ROTEE ACTIVITIES, PROGRAM AND PERSONNEL DATA, FY 1976

INSTALLATION	FUNDING DATA (MILLIONS \$)				PERSONNEL DATA									
	TOTAL	IMHOUSE	ROTEE	IMHOUSE	TOTAL	CIV	MIL	PHD	CIV	MIL	PHD	CIV	MIL	PROF
AEROSPACE MEDICAL RESEARCH LABORATORY	6,172	6,172	5,399	5,399	56	119	18	18	24	64				44
AIR DEVELOPMENT CENTER	193,599	76,132	123,360	93,189	291	2349	3	35	64	1160				
AIR ENGINEERING CENTER	94,907	41,382	20,890	18,768	230	1667	1	2	37	359				
AIR PRODUCTION TEST CENTER	21,310	14,302	16,998	11,204	8	619	0	2	8	159				
AIR TEST CENTER	100,074	83,953	56,656	47,592	1520	2262	3	7	192	317				
AIR TEST FACILITY (SHIP INSTALLATIONS)	11,435	10,387	2,564	1,712	110	350	0	1	13	74				
ARCTIC RESEARCH LABORATORY	8,244	0,034	6,756	0,000	2	0	0	0	0	1	0			
BIOLOGICAL RESEARCH LABORATORY	2,962	0,596	2,188	0,330	18	6	5	1	8	1				
BLOOD RESEARCH LABORATORY	1,848	1,848	0,818	0,818	17	12	3	0	5	3				
CIVIL ENGINEERING LABORATORY	14,312	9,536	11,571	7,261	15	300	1	30	9	166				
CLOTHING AND TEXTILE RESEARCH UNIT	1,518	1,341	0,691	0,691	1	60	0	1	1	33				
COASTAL SYSTEMS LABORATORY	32,227	23,928	24,664	17,340	115	631	1	23	13	286				
DENTAL RESEARCH INSTITUTE, NTC	0,975	0,975	0,540	0,540	25	16	9	3	11	6				
ELECTRONICS LABORATORY CENTER	89,380	51,060	55,142	34,945	84	1433	3	85	30	805				
ENVIRONMENTAL PREDICTION RESEARCH FACILITY	2,620	1,477	2,302	1,726	14	41	1	1	4	21				
EXPLOSIVE ORDNANCE DISPOSAL FACILITY	9,767	5,850	3,540	1,655	57	168	0	3	36	41				
HEALTH RESEARCH CENTER	2,628	2,628	2,057	2,057	32	73	10	11	13	28				
MEDICAL ATPLC RESEARCH LABORATORY	1,177	1,147	0,807	0,785	20	30	2	1	3	4				
MEDICAL RESEARCH INSTITUTE	12,721	12,721	10,035	10,035	221	210	62	45	221	92				
MEDICAL RESEARCH UNIT NO. 2	2,551	2,551	1,992	1,897	72	4	8	1	20	3				
MEDICAL RESEARCH UNIT NO. 3	1,455	1,455	1,100	1,100	75	217	5	3	9	23				
MEDICAL RESEARCH UNIT NO. 5 (ETHIOPIA)	0,966	0,966	0,607	0,607	19	58	3	3	4	6				
NATIONAL PARACHUTE TEST RANGE	16,344	13,594	9,133	7,423	262	290	5	0	36	32				
ORDNANCE MISSILE TEST FACILITY	4,908	3,675	3,508	2,354	93	65	0	0	33	2				
PACIFIC MISSILE TEST CENTER	197,710	138,408	120,239	97,864	1004	4563	5	15	277	1211				
PERSONNEL RESEARCH & DEVELOPMENT CENTER	11,456	7,518	8,369	5,237	27	270	1	67	21	196				
RESEARCH LABORATORY	181,151	155,114	161,364	115,327	133	3507	0	507	34	1524				
SHIP RESEARCH AND DEVELOPMENT CENTER	115,339	93,669	93,294	63,866	70	2771	1	125	17	1221				
SURFACING MEDICAL RESEARCH LABORATORY	2,077	2,077	1,653	1,653	32	60	6	11	8	29				
SURFACE WEAPONS CENTER	244,601	124,532	174,938	81,202	128	5132	2	251	60	2264				
UNDERSEA CENTER	98,747	57,857	69,764	43,407	280	1596	2	122	22	798				
UNDERWATER RANGES DIRECTORATE	20,891	5,050	15,378	3,812	42	48	0	1	17	30				
UNDERWATER SYSTEMS CENTER	177,108	101,658	69,442	49,739	104	3019	1	96	27	1592				
WEAPONS CENTER	217,344	125,067	125,055	79,300	516	4366	0	138	49	1482				
WEAPONS EVALUATION FACILITY	8,564	8,564	1,747	1,747	149	116	0	0	53	46				
TOTALS	1889,1071187.2351173.448	766.431	5754	36228	161	1609	1384	14058						

TABLE 4. NAVY ROTEC FACILITIES DATA, FY 1976

INSTALLATION	SPACE AND PROPERTY			COST (MILLIONS \$)	
	ACRES	LABORATORY	ADMIN	OTHER	REAL
AEROSPACE MEDICAL RESEARCH LABORATORY	1	212.000	46.500	12.000	3.130
AIR DEVELOPMENT CENTER	750	833.000	43.000	431.000	25.585
AIR ENGINEERING CENTER	7416	257.984	130.677	2278.739	15.800
AIR PROPULSION TEST CENTER	68	391.044	37.520	190.173	50.497
AIR TEST CENTER	6638	15.125	483.032	4419.105	17.157
AIR TEST FACILITY (SHIP INSTALLATIONS)	4000	67.612	15.113	44.056	6.818
ARCTIC RESEARCH LABORATORY	4973	40.600	5.800	209.400	30.587
BIOMEDICAL RESEARCH LABORATORY	5	64.700	8.731	45.373	3.000
BLOOD RESEARCH LABORATORY	1	12.880	2.760	8.560	0.715
CIVIL ENGINEERING LABORATORY	22	120.352	23.977	51.543	2.055
CLOTHING AND TEXTILE RESEARCH UNIT	2	10.000	7.000	3.000	0.767
COASTAL SYSTEMS LABORATORY	642	299.133	35.198	307.423	29.871
DENTAL RESEARCH INSTITUTE, MTC	0	11.780	10.174	9.487	13.214
ELECTRONICS LABORATORY CENTER	1548	461.049	122.732	85.324	0.000
ENVIRONMENTAL PREDICTION RESEARCH FACILITY	0	1.808	5.012	10.490	0.974
EXPLOSIVE ORDNANCE DISPOSAL FACILITY	1084	50.400	23.397	26.416	3.780
HEALTH RESEARCH CENTER	1	11.177	4.500	0.000	1.880
MEDICAL FIELD RESEARCH LABORATORY	0	29.816	8.655	19.381	0.466
MEDICAL RESEARCH INSTITUTE	4	133.495	12.945	38.547	4.122
MEDICAL RESEARCH UNIT NO. 2	2	32.882	16.075	48.364	0.681
MEDICAL RESEARCH UNIT NO. 3	3	26.165	8.288	34.747	0.776
MEDICAL RESEARCH UNIT NO. 5 (ETHIOPIA)	0	5.096	1.587	0.645	0.000
NATIONAL PARACHUTE TEST RANGE	484608	6.400	56.670	1142.407	15.534
ORDNANCE MISSILE TEST FACILITY	112	0.000	90.540	316.047	0.886
PACIFIC MISSILE TEST CENTER	27090	290.921	572.263	2462.024	133.419
PERSONNEL RESEARCH & DEVELOPMENT CENTER	1	49.300	0.000	0.000	0.302
RESEARCH LABORATORY	699	2140.804	236.893	594.454	82.746
SHIP RESEARCH AND DEVELOPMENT CENTER	322	388.522	192.814	1405.876	71.138
SUBMARINE MEDICAL RESEARCH LABORATORY	1	23.325	6.441	13.118	1.071
SURFACE WEAPONS CENTER	5380	897.933	259.161	1569.511	90.663
UNDERSEA CENTER	37398	516.055	96.935	390.049	50.018
UNDERWATER RANGES DIRECTORATE	1042	67.000	11.172	266.044	23.575
UNDERWATER SYSTEMS CENTER	314	842.244	107.528	532.378	35.202
WEAPONS CENTER	1093634	101.020	357.595	5735.192	221.995
WEAPONS EVALUATION FACILITY	7	0.400	53.592	44.926	9.600
TOTALS	1677808	8412.122	3099.178	22870.799	1194.890
					725.304

TABLE 5. AIR FORCE ROTEC ACTIVITIES, PROGRAM AND PERSONNEL DATA, FY 1976

INSTALLATION	FUNDING DATA (MILLIONS \$)				PERSONNEL DATA									
	TOTAL	INHOUSE	TOTAL	ROTEC	ROTEC	TOTAL	MIL	CIV	TOTAL	PHD	MIL	CIV	PHD	PROF
AERO PROPULSION LABORATORY	61.350	11.426	60.401	10.477	49	354	49	25	43	191				
ARMAMENT DEVELOPMENT AND TEST CENTER	530.109	173.591	98.508	33.009		4379	2900	92	20	1247	484			
ARNOLD ENGINEERING DEVELOPMENT CENTER	105.122	99.205	97.394	97.394		84	152	8	5	57	61			
AVIONICS LABORATORY	120.372	18.638	125.294	15.560		179	821	12	35	147	460			
CIVIL ENGINEERING CENTER	8.757	4.234	4.137	0.414		189	27	10	3	75	17			
EASTERN TEST RANGE	186.392	82.497	1.216	1.216		1032	1562	1	6	108	109			
FLIGHT DYNAMICS LABORATORY	93.655	31.391	89.589	27.931		199	854	17	45	125	492			
FLIGHT TEST CENTER	119.421	94.175	71.642	53.750		3570	1507	1	20	189	386			
FRANK J. SEILER RESEARCH LABORATORY	1.744	1.082	0.793	0.631		22	9	17	1	14	4			
GEOPHYSICS LABORATORY	61.067	23.317	55.931	21.024		120	509	12	77	36	328			
HUMAN RESOURCES LABORATORY	14.994	7.311	13.242	5.559		125	230	14	41	65	109			
MATERIALS LABORATORY	66.252	16.072	41.921	14.638		53	345	13	45	67	243			
ROCKET PROPULSION LABORATORY	33.314	13.947	29.093	11.631		177	264	6	10	77	93			
ROME AIR DEVELOPMENT CENTER	164.490	20.200	57.674	15.124		237	1203	12	60	102	630			
SCHOOL OF AEROSPACE MEDICINE	20.574	19.033	10.185	8.715		302	285	57	33	84	110			
SPACE AND MISSILE TEST CENTER	60.929	16.705	48.209	9.798		397	327	3	0	162	113			
WEAPONS LABORATORY	112.457	30.312	94.643	17.707		682	459	75	31	422	219			
6570 AEROSPACE MEDICAL RESEARCH LABORATORY	16.062	8.186	12.712	4.836		133	158	22	28	60	97			
TOTALS	1784.561	671.322	917.484	349.414		12019	11966	378	479	3085	4146			

TABLE 6. AIR FORCE ROTEE FACILITIES DATA, FY 1976

INSTALLATION	SPACE AND PROPERTY SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLIONS \$)	
	ACRES	LABORATORY	ADMIN	OTHER	REAL PROPERTY	EQUIPMENT
AERO PROPULSION LABORATORY	40	227.103	32.999	390.434	12.303	18.849
ARMAMENT DEVELOPMENT AND TEST CENTER	464248	131.545	553.506	9060.802	201.451	400.000
ARNOLD ENGINEERING DEVELOPMENT CENTER	39875	1151.654	201.411	534.954	374.992	66.871
AVIONICS LABORATORY	230	229.901	12.152	412.829	22.252	66.000
CIVIL ENGINEERING CNTRK	760	10.136	22.391	27.612	1.285	2.535
EASTERN TEST RANGE	17220	110.933	1125.084	4587.672	396.791	421.902
FLIGHT DYNAMICS LABORATORY	90	497.000	161.820	258.269	25.759	68.500
FLIGHT TEST CENTER	246323	998.928	258.405	6241.936	227.608	82.880
FRANK J. SFLER RESEARCH LABORATORY	0	9.900	2.800	0.240	1.370	1.865
GEOPHYSICS LABORATORY	269	422.418	14.813	31.383	10.199	38.526
HUMAN RESOURCES LABORATORY	13	69.511	35.654	36.582	2.771	27.903
MATERIALS LABORATORY	15	222.809	25.169	111.156	18.851	14.200
ROCKET PROPULSION LABORATORY	72560	419.046	86.848	4.780	125.000	44.600
ROME AIR DEVELOPMENT CENTER	1494	802.827	83.496	128.713	24.873	54.553
SCHOOL OF AEROSPACE MEDICINE	74	360.655	77.980	48.737	13.143	22.343
SPACE AND MISSILE TEST CENTER	55657	91.407	334.384	431.954	94.520	76.616
WEAPONS LABORATORY	702	531.810	123.071	125.495	18.785	40.443
6570 AEROSPACE MEDICAL RESEARCH LABORATORY	30	223.459	10.000	16.880	12.012	17.376
TOTALS	899510	6511.042	3161.983	22450.428	1573.965	1465.962

TABLE 7. DEPARTMENT OF DEFENSE RDT&E ACTIVITIES, PROGRAM AND PERSONNEL DATA, FY 1976

INSTALLATION	FUNDING DATA (MILLIONS \$)	PERSONNEL DATA									
		TOTAL		TOTAL INHOUSE		TOTAL		TOTAL		TOTAL	
		RD&E	RD&E	RD&E	RD&E	MIL	CIV	MIL	CIV	MIL	CIV
ARMED FORCES RADIOBIOLOGY RES. INSTITUTE	8FTHE50A,MD	5.798	5.798	4.332	4.332	87	137	18	18	53	53
TOTALS		5.798	5.798	4.332	4.332	87	137	18	18	53	53

# SUMMARY

## DEPARTMENT OF DEFENSE IN-HOUSE R&D LABORATORIES

### PROGRAM DATA FOR FY 1976

	(MILLIONS)
TOTAL ANNUAL LABORATORY PROGRAM	4228.844
TOTAL INHOUSE PROGRAM	2025.673
TOTAL RDT&E PROGRAM	2492.490
TOTAL INHOUSE RDT&E	1253.984
TOTAL ANNUAL OPERATING COST	557.367

### PERSONNEL DATA (END OF FY 1976)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHD	TOTAL PROFESSIONALS
MILITARY	12224	868	4562
CIVILIAN	56731	3288	25018
TOTAL	68955	4156	29580

### PHYSICAL FACILITIES (END OF FY 1976)

ACRES	1725402
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#### SPACE (THOUSANDS OF SQ FT)

LABORATORY	21040.153
ADMINISTRATIVE	5624.704
OTHER	30596.338
TOTAL	57261.195

#### COST (MILLIONS)

REAL PROPERTY	1815.972
EQUIPMENT	1902.283
TOTAL	3718.255



TABLE 1A. ARMY R&amp;D LABORATORIES, PROGRAM AND PERSONNEL DATA, FY 1976

INSTALLATION	FUNDING DATA (MILLIONS \$)			PERSONNEL DATA									
	TOTAL	INHOUSE	RD&E	TOTAL	INHOUSE	RD&E	TOTAL	PHD	PHD	PROF	PROF	CIV	CIV
AEROMEDICAL RESEARCH LABORATORY	3,365	3,365	2,303	58	57	17	6	23	17	17	17	17	17
AIR MOBILITY R&D LABORATORY	48,444	13,950	47,542	27	586	2	28	17	276	276	276	276	276
ATMOSPHERIC SCIENCES LABORATORY	13,174	10,688	13,073	440	225	0	14	22	104	104	104	104	104
AVIONICS LABORATORY	16,084	11,382	10,605	12	183	0	4	6	129	129	129	129	129
BALLISTICS RESEARCH LABORATORIES	41,410	30,405	38,033	27	777	0	107	42	439	439	439	439	439
BENET WEAPONS LABORATORY	16,885	13,922	10,093	5	377	0	41	5	178	178	178	178	178
COLD REGIONS R&E LABORATORY	9,106	6,803	6,090	13	276	0	26	7	98	98	98	98	98
COMBAT SURVEILLANCE & TGT ACQUISITION LABS	32,746	14,839	28,077	11	240	0	12	9	153	153	153	153	153
COMMUNICATIONS ADP LABORATORY	23,360	19,092	18,185	12	361	1	16	7	255	255	255	255	255
CONSTRUCTION ENGINEERING RESEARCH LABORATORY	14,997	12,132	13,107	3	209	0	27	3	108	108	108	108	108
EDGEWOOD ARSENAL LABORATORIES	65,680	60,537	48,651	126	824	30	55	82	460	460	460	460	460
ELECTRONIC WARFARE LABORATORY	88,844	22,478	49,774	60	434	0	9	3	235	235	235	235	235
ELECTRONICS TECHNOLOGY AND DEVICES LAB	23,023	12,645	21,202	4	340	0	37	4	220	220	220	220	220
ENGINEER TOPOGRAPHIC LABORATORIES	15,663	7,143	15,375	16	261	1	20	11	164	164	164	164	164
ENGINEER WATERWAYS EXPERIMENT STATION	47,253	37,224	12,386	39	1350	3	80	26	463	463	463	463	463
FRANKFORD ARSENAL LABORATORIES	194,635	73,536	23,535	10	1079	0	33	10	559	559	559	559	559
HARRY DIAMOND LABORATORIES	142,939	40,452	65,282	30	141	1	18	11	89	89	89	89	89
HUMAN ENGINEERING LABORATORY	7,872	5,722	7,198	5	5,071	5	0	1	18	18	18	18	18
INSTITUTE OF DENTAL RESEARCH	1,940	1,940	0,827	62	26	23	2	45	7	7	7	7	7
INSTITUTE OF SURGICAL RESEARCH	3,553	3,553	1,635	136	78	19	3	21	61	61	61	61	61
LETTERMAN ARMY INSTITUTE OF RESEARCH	9,097	9,097	6,227	260	201	20	18	102	204	204	204	204	204
MATERIALS AND MECHANICS RESEARCH CENTER	32,309	19,402	22,486	16	641	2	64	7	34	34	34	34	34
MEDICAL BIOENGINEERING R&D LABORATORY	3,429	3,429	2,836	27	81	10	12	27	34	34	34	34	34
MEDICAL RESEARCH INST OF INFECTIOUS DISEASES	10,317	10,317	7,207	315	198	48	24	56	63	63	63	63	63
MISSILE RES., DEV. AND ENGINEERING LAB	110,868	57,551	88,523	36	1243	1	83	28	768	768	768	768	768
MOBILITY EQUIPMENT R&D COMMAND	97,461	38,310	51,995	68	1207	2	21	34	429	429	429	429	429
MOBILITY SYSTEMS LABORATORY	49,381	22,288	26,870	37	838	1	10	14	276	276	276	276	276
NATICK R&D COMMAND	43,506	30,434	25,252	104	1152	5	93	22	463	463	463	463	463
NIGHT VISION LABORATORY	40,954	17,512	40,954	28	410	0	31	7	207	207	207	207	207
PICATINNY ARSENAL LABORATORIES	134,241	86,194	85,400	84	4174	0	63	16	1603	1603	1603	1603	1603
RESEARCH INST FOR BEHAVIORAL & SOCIAL SCI	19,667	8,123	19,667	36	233	1	123	40	183	183	183	183	183
RESEARCH INSTITUTE OF ENVIRONMENTAL MEDICINE	4,590	4,590	3,540	82	80	16	20	57	37	37	37	37	37
WALTER REED ARMY INSTITUTE OF RESEARCH	23,568	23,568	15,146	456	500	131	63	430	511	511	511	511	511
TOTALS	1390,361	732,623	829,076	2650	20181	337	1235	1204	9310	9310	9310	9310	9310

TABLE 2A. ARMY R&amp;D FACILITIES DATA, FY 1976

INSTALLATION	SPACE AND PROPERTY				COST (MILLIONS \$)	
	ACRES	LABORATORY	ADMIN	OTHER	REAL	PROPERTY EQUIPMENT
AEROMEDICAL RESEARCH LABORATORY	10	52.747	7.797	23.772	0.884	7.400
AIR MOBILITY R&D LABORATORY	108	85.014	43.308	15.584	1.474	5.470
ATMOSPHERIC SCIENCES LABORATORY	45	51.000	3.100	3.620	48.000	22.000
ATONICS LABORATORY	0	25.742	30.108	0.000	0.000	12.139
BALLISTICS RESEARCH LABORATORIES	1920	537.624	20.103	34.157	40.462	29.998
BENET WEAPONS LABORATORY	4	167.463	24.600	7.489	4.018	6.663
COLD REGIONS REE LABORATORY	24	17.230	6.168	97.646	4.789	6.278
COMBAT SURVEILLANCE & TGT ACQUISITION LABS	227	88.475	6.139	12.569	3.950	15.848
COMMUNICATIONS APP LABORATORY	0	41.000	48.000	1.000	0.000	12.019
CONSTRUCTION ENGINEERING RESEARCH LABORATORY	30	76.081	34.159	0.000	3.896	4.067
EDGEWOOD ARSENAL LABORATORIES	2000	501.312	124.180	98.595	17.103	15.494
ELECTRONIC WARFARE LABORATORY	0	142.936	13.617	48.502	0.000	47.800
ELECTRONICS TECHNOLOGY AND DEVICES LAB	0	95.617	10.575	25.936	0.000	10.931
ENGINEER TOPOGRAPHIC LABORATORIES	33	90.722	7.000	19.280	6.000	11.000
ENGINEER WATTHWAYS EXPERIMENT STATION	2092	1665.220	330.304	170.806	17.211	29.096
FRANKFORD ARSENAL LABORATORIES	43	577.421	149.872	425.050	16.960	12.549
HARRY DIAMOND LABORATORIES	2830	277.944	177.369	367.789	33.854	28.991
HUMAN ENGINEERING LABORATORY	10	30.776	19.352	29.538	0.761	3.250
INSTITUTE OF DENTAL RESEARCH	4	9.325	5.696	6.730	0.853	1.118
INSTITUTE OF SURGICAL RESEARCH	1	26.424	1.800	22.408	2.013	1.681
LETTERMAN ARMY INSTITUTE OF RESEARCH	5	119.520	116.792	103.584	42.449	9.048
MATERIALS AND MECHANICS RESEARCH CENTER	48	389.161	96.018	169.979	15.726	15.962
MEDICAL BIOENGINEERING R&D LABORATORY	5	44.325	27.300	35.631	2.918	2.157
MEDICAL RESEARCH INST OF INFECTIOUS DISEASES	43	80.854	19.820	209.699	17.824	3.900
MISSILE RES., DEV. AND ENGINEERING LAB	11000	1175.000	262.000	408.000	32.000	75.000
MOBILITY EQUIPMENT R&D COMMAND	1064	693.649	115.530	194.279	49.542	30.000
MOBILITY SYSTEMS LABORATORY	43	458.568	126.433	62.644	20.970	7.500
NATICK R&D COMMAND	2994	550.562	65.900	412.268	25.878	15.856
NIGHT VISION LABORATORY	21	73.261	3.521	67.207	43.961	40.905
PICATINNY ARSENAL LABORATORIES	5852	619.590	612.391	2643.053	76.363	58.573
RESEARCH INST FOR BEHAVIORAL & SOCIAL SCI	0	42.000	8.000	4.000	0.000	1.708
RESEARCH INSTITUTE OF ENVIRONMENTAL MEDICINE	4	60.421	18.563	28.647	3.663	2.695
WALTER REED ARMY INSTITUTE OF RESEARCH	206	382.494	58.360	0.000	9.165	15.224
TOTALS	30666	9249.479	2593.905	5779.442	542.687	562.320

TABLE 3A. NAVY R&amp;D LABORATORIES, PROGRAM AND PERSONNEL DATA, FY 1976

INSTALLATION	FUNDING DATA (MILLIONS \$)				PERSONNEL DATA									
	TOTAL INHOUSE		TOTAL INHOUSE		TOTAL		TOTAL		TOTAL		TOTAL		TOTAL	
	ADTGE	RDYGE	ADTGE	RDYGE	ADTGE	RDYGE	ADTGE	RDYGE	MIL	CIV	PHD	MIL	PHD	PROF
AEROSPACE MEDICAL RESEARCH LABORATORY	6,172	5,399	6,172	5,399	193,599	76,132	123,360	53,159	58	119	18	18	26	44
AIR DEVELOPMENT CENTER	84,907	41,382	20,980	18,768	84,907	41,382	20,980	18,768	291	2349	3	35	66	1160
AIR ENGINEERING CENTER	8,344	0,039	6,756	0,000	8,344	0,039	6,756	0,000	2	0	0	0	1	0
ARCTIC RESEARCH LABORATORY	2,962	0,596	2,188	0,330	2,962	0,596	2,188	0,330	18	6	5	1	8	1
BIOLOGICAL RESEARCH LABORATORY	1,848	1,848	0,818	0,818	1,848	1,848	0,818	0,818	17	12	3	0	5	3
BLOOD RESEARCH LABORATORY	14,312	9,536	11,571	7,261	14,312	9,536	11,571	7,261	15	300	1	30	9	166
CIVIL ENGINEERING LABORATORY	1,518	1,341	0,691	0,691	1,518	1,341	0,691	0,691	1	60	0	1	1	33
CLOTHING AND TEXTILE RESEARCH UNIT	32,227	23,928	24,664	17,340	32,227	23,928	24,664	17,340	115	631	1	23	13	286
COASTAL SYSTEMS LABORATORY	0,975	0,975	0,540	0,540	0,975	0,975	0,540	0,540	25	16	9	3	11	6
DENTAL RESEARCH INSTITUTE, NTC	80,289	51,040	55,142	34,945	80,289	51,040	55,142	34,945	24	1433	3	85	30	805
ELECTRONICS LABORATORY CENTER	2,628	2,628	2,057	2,057	2,628	2,628	2,057	2,057	32	73	10	11	13	28
ENVIRONMENTAL PROTECTION RESEARCH FACILITY	1,177	1,147	0,800	0,785	1,177	1,147	0,800	0,785	20	30	2	1	3	4
HEALTH RESEARCH CENTER	12,721	12,721	10,035	10,035	12,721	12,721	10,035	10,035	221	210	62	45	221	92
MEDICAL FIELD RESEARCH LABORATORY	2,551	2,551	1,892	1,892	2,551	2,551	1,892	1,892	32	4	8	1	20	3
MEDICAL RESEARCH INSTITUTE	1,455	1,455	1,100	1,100	1,455	1,455	1,100	1,100	25	217	5	3	9	23
MEDICAL RESEARCH UNIT NO. 2	0,966	0,966	0,607	0,607	0,966	0,966	0,607	0,607	19	58	3	3	4	6
MEDICAL RESEARCH UNIT NO. 3	11,459	7,515	8,369	5,232	11,459	7,515	8,369	5,232	27	270	1	67	21	196
MEDICAL RESEARCH UNIT NO. 5	181,151	155,114	141,364	115,327	181,151	155,114	141,364	115,327	133	3507	0	507	34	1524
PERSONNEL RESEARCH & DEVELOPMENT CENTER	115,339	93,669	83,294	63,660	115,339	93,669	83,294	63,660	70	2771	1	125	17	1221
RESEARCH LABORATORY	2,077	2,077	1,653	1,653	2,077	2,077	1,653	1,653	32	60	6	11	8	29
SHIP RESEARCH AND DEVELOPMENT CENTER	244,601	124,532	174,938	81,702	244,601	124,532	174,938	81,702	128	5132	2	251	60	2264
SUBMARINE MEDICAL RESEARCH LABORATORY	98,747	57,857	69,764	43,402	98,747	57,857	69,764	43,402	280	1596	2	122	22	798
SURFACE WEAPONS CENTER	20,891	5,059	15,378	3,812	20,891	5,059	15,378	3,812	42	48	0	1	17	30
UNDERSEA CENTER	177,108	101,658	69,442	49,739	177,108	101,658	69,442	49,739	104	3019	1	96	27	1592
UNDERWATER RANGES DIRECTORATE	217,344	125,047	125,055	79,300	217,344	125,047	125,055	79,300	516	4366	0	138	49	1482
UNDERWATER SYSTEMS CENTER	1519,988	908,512	960,059	600,280	1519,988	908,512	960,059	600,280	2551	27995	148	1581	736	12176
WEAPONS CENTER														
TOTALS														

TABLE 4A. NAVY REC FACILITIES DATA, FY 1976

INSTALLATION	SPACE AND PROPERTY				COST (MILLIONS \$)	
	ACRES	LABORATORY	ADMIN	OTHER	REAL	EQUIPMENT
SPACE (THOUSANDS OF SQUARE FEET)						
AEROSPACE MEDICAL RESEARCH LABORATORY	1	212.000	46.500	12.000	3.130	3.162
AIR DEVELOPMENT CENTER	750	833.000	43.000	451.000	25.585	32.043
AIR ENGINEERING CENTER	7416	257.984	130.677	2278.739	82.981	15.800
ARCTIC RESEARCH LABORATORY	4973	40.800	5.800	209.400	30.587	19.413
BIOMEDICAL RESEARCH LABORATORY	5	64.700	8.731	45.373	0.100	3.000
BLOOD RESEARCH LABORATORY	1	12.820	2.760	8.560	0.500	0.715
CIVIL ENGINEERING LABORATORY	22	120.352	23.977	51.543	2.055	2.780
CLOTHING AND TEXTILE RESEARCH UNIT	2	10.000	7.000	3.000	0.400	0.767
COASTAL SYSTEMS LABORATORY	682	299.133	35.198	307.423	29.871	13.214
ELECTRONICS LABORATORY	0	11.780	10.174	9.487	0.000	0.645
ENVIRONMENTAL PREDICTION RESEARCH FACILITY	1548	461.049	122.732	85.324	16.224	55.131
HEALTH RESEARCH CENTER	0	1.808	5.012	10.490	0.000	0.974
MEDICAL FIELD RESEARCH LABORATORY	1	11.177	4.500	0.000	1.880	0.267
MEDICAL RESEARCH INSTITUTE	0	29.816	8.655	19.381	0.000	0.466
MEDICAL RESEARCH UNIT NO. 2	4	133.495	12.945	38.547	4.122	6.540
MEDICAL RESEARCH UNIT NO. 3	2	32.882	16.075	48.364	0.101	0.681
MEDICAL RESEARCH UNIT NO. 5 (ETHIOPIA)	3	26.165	8.288	34.747	1.075	0.776
PERSONNEL RESEARCH & DEVELOPMENT CENTER	0	5.096	1.587	0.645	0.000	0.239
RESEARCH LABORATORY	1	49.300	4.900	0.000	0.302	1.490
SHIP RESEARCH AND DEVELOPMENT CENTER	699	2140.804	236.893	594.454	82.746	77.869
SUBMARINE MEDICAL RESEARCH LABORATORY	322	388.522	192.814	1405.876	71.138	44.766
SURFACE WEAPONS CENTER	1	23.325	6.441	13.118	1.071	1.505
UNDERSEA CENTER	5380	897.833	259.161	1569.511	90.663	66.292
UNDERWATER RANGES DIRECTORATE	37398	516.055	96.935	390.049	50.018	49.679
UNDERWATER SYSTEMS CENTER	1042	67.000	11.173	266.044	23.575	1.175
WEAPONS CENTER	314	842.244	107.528	532.378	35.202	39.285
	1793634	101.020	351.595	5735.192	221.995	79.717
TOTALS	1154201	7590.220	1767.051	14120.645	775.321	518.391

TABLE 5A. AIR FORCE RCD LABORATORIES, PROGRAM AND PERSONNEL DATA, FY 1976

INSTALLATION	FUNDING DATA (MILLIONS \$)				PERSONNEL DATA									
	TOTAL		TOTAL INHOUSE		TOTAL	TOTAL		TOTAL		TOTAL		TOTAL		PROF
	INHOUSE	ROT&E	INHOUSE	ROT&E		INHOUSE	ROT&E	INHOUSE	ROT&E	MIL	CIV	PHD	PHD	
AERO PROPULSION LABORATORY	61.350	11.426	60.401	10.477	49	354	6	25	43	191				CIV
ARMAMENT DEVELOPMENT AND TEST CENTER	530.109	173.591	98.508	33.009	4379	2900	92	20	1247	484				
AVIONICS LABORATORY	128.372	18.638	125.294	15.560	179	821	12	35	147	460				
CIVIL ENGINEERING CENTER	8.757	4.234	4.137	0.414	189	27	10	3	75	17				
FLIGHT DYNAMICS LABORATORY	93.655	31.391	89.589	27.931	199	854	17	45	125	492				
FRANK J. SEILER RESEARCH LABORATORY	1.244	1.082	0.793	0.631	22	9	17	1	19	4				
GEOPHYSICS LABORATORY	61.067	23.317	55.831	21.024	120	509	12	77	36	328				
HUMAN RESOURCES LABORATORY	14.994	7.311	13.242	5.559	125	230	14	41	65	109				
MATERIALS LABORATORY	66.252	16.072	41.921	14.638	53	345	13	45	67	243				
ROCKET PROPULSION LABORATORY	33.314	13.967	29.093	11.631	177	264	6	10	77	93				
Rome AIR DEVELOPMENT CENTER	164.490	20.200	57.674	15.124	237	1203	12	60	102	630				
SCHOOL OF AEROSPACE MEDICINE	20.574	19.033	10.185	8.715	392	285	57	33	84	110				
WEAPONS LABORATORY	112.457	30.312	99.643	17.707	682	459	75	31	422	219				
6570 AEROSPACE MEDICAL RESEARCH LABORATORY	16.062	8.186	12.712	4.836	133	158	22	28	60	97				
TOTALS	1312.697	378.740	695.023	187.256	6936	8418	365	454	2569	3477				



TABLE 7A. DEPARTMENT OF DEFENSE ROT&F FACILITIES DATA, FY 1976

INSTALLATION	BETHESDA, MD	SPACE AND PROPERTY SPACE (THOUSANDS OF SQUARE FEET)		COST (MILLIONS \$)	
		ACRFS LABORATORY 10	ADMIN 21.049	REAL PROPERTY 7.910	EQUIPMENT 3.879
ARMED FORCES RADIOLOGICAL RES. INSTITUTE		42.335			
TOTALS		10	42.335	21.049	42.330
				7.910	3.879

TABLE 8 - ARMY RESEARCH AND DEVELOPMENT LABORATORY ORGANIZATIONAL RELATIONSHIPS

COMMAND CHAIN		
INTERMEDIATE		COMMAND
AEROMEDICAL RESEARCH LABORATORY	MEDICAL R&D COMMAND	THE SURGEON GENERAL
AIR MOBILITY RESEARCH AND DEVELOPMENT LABS	AVIATION SYSTEMS COMMAND	ARMY MAT. DEV. & READ. CMD.
ATMOSPHERIC SCIENCES LABORATORY	ELECTRONICS COMMAND	ARMY MAT. DEV. & READ. CMD.
AVIONICS LABORATORY	ELECTRONICS COMMAND	ARMY MAT. DEV. & READ. CMD.
BALLISTICS RESEARCH LABORATORIES	--	ARMY MAT. DEV. & READ. CMD.
BENET WEAPONS LABORATORY	ARMAMENT COMMAND	ARMY MAT. DEV. & READ. CMD.
COLD REGIONS R&E LABORATORY	--	CHIEF OF ENGINEERS
COMBAT SURVEILLANCE & TARGET ACQUISITION LABS	ELECTRONICS COMMAND	ARMY MAT. DEV. & READ. CMD.
COMMUNICATIONS ADP LABORATORY	ELECTRONICS COMMAND	ARMY MAT. DEV. & READ. CMD.
CONSTRUCTION ENGINEERING RESEARCH LABORATORY	--	CHIEF OF ENGINEERS
EDGEWOOD ARSENAL LABORATORIES	ARMAMENT COMMAND	ARMY MAT. DEV. & READ. CMD.
ELECTRONIC WARFARE LABORATORY	ELECTRONICS COMMAND	ARMY MAT. DEV. & READ. CMD.
ELECTRONICS TECHNOLOGY & DEVICES LABORATORY	ELECTRONICS COMMAND	ARMY MAT. DEV. & READ. CMD.
ENGINEER TOPOGRAPHIC LABORATORIES	--	CHIEF OF ENGINEERS
ENGINEER WATERWAYS EXPERIMENT STATION	--	CHIEF OF ENGINEERS
FRANKFORD ARSENAL LABORATORIES	ARMAMENT COMMAND	ARMY MAT. DEV. & READ. CMD.
HARRY DIAMOND LABORATORIES	--	ARMY MAT. DEV. & READ. CMD.
HUMAN ENGINEERING LABORATORY	--	ARMY MAT. DEV. & READ. CMD.
INSTITUTE OF DENTAL RESEARCH	--	THE SURGEON GENERAL
INSTITUTE OF SURGICAL RESEARCH	MEDICAL R&D COMMAND	THE SURGEON GENERAL
LETTERMAN ARMY INSTITUTE OF RESEARCH	MEDICAL R&D COMMAND	THE SURGEON GENERAL
MATERIALS AND MECHANICS RESEARCH CENTER	--	ARMY MAT. DEV. & READ. CMD.
MEDICAL BIOENGINEERING R&D LABORATORY	MEDICAL R&D COMMAND	THE SURGEON GENERAL
MEDICAL RESEARCH INST. OF INFECTIOUS DISEASES	MISSILE COMMAND	THE SURGEON GENERAL
MISSILE RD&E LABORATORY	--	ARMY MAT. DEV. & READ. CMD.
MOBILITY EQUIPMENT R&D COMMAND	MEDICAL R&D COMMAND	THE SURGEON GENERAL
MOBILITY SYSTEMS LABORATORY	--	ARMY MAT. DEV. & READ. CMD.
NATICK R&D COMMAND	TANK-AUTOMOTIVE COMMAND	ARMY MAT. DEV. & READ. CMD.
NIGHT VISION LABORATORY	--	ARMY MAT. DEV. & READ. CMD.
	ELECTRONICS COMMAND	



TABLE 8 - ARMY RESEARCH AND DEVELOPMENT LABORATORY ORGANIZATIONAL RELATIONSHIPS

	<u>COMMAND CHAIN</u>	
	<u>INTERMEDIATE</u>	<u>COMMAND</u>
PICATINNY ARSENAL LABORATORIES	ARMAMENT COMMAND	ARMY MAT. DEV. & READ. CMD.
RES. INST. FOR BEHAVIORAL & SOCIAL SCIENCES	--	DEPUTY CHIEF OF STAFF FOR PERSONNEL
RESEARCH INSTITUTE OF ENVIRONMENTAL MEDICINE	MEDICAL R&D COMMAND	THE SURGEON GENERAL
* ROCK ISLAND ARSENAL LABORATORIES	ARMAMENT COMMAND	ARMY MAT. DEV. & READ. CMD.
WALTER REED ARMY INSTITUTE OF RESEARCH	MEDICAL R&D COMMAND	THE SURGEON GENERAL

\* ABOLISHED 31 JAN 1977. NO DATA AVAILABLE FOR FY 76.

TABLE 9 - NAVY RESEARCH AND DEVELOPMENT LABORATORY ORGANIZATIONAL RELATIONSHIPS

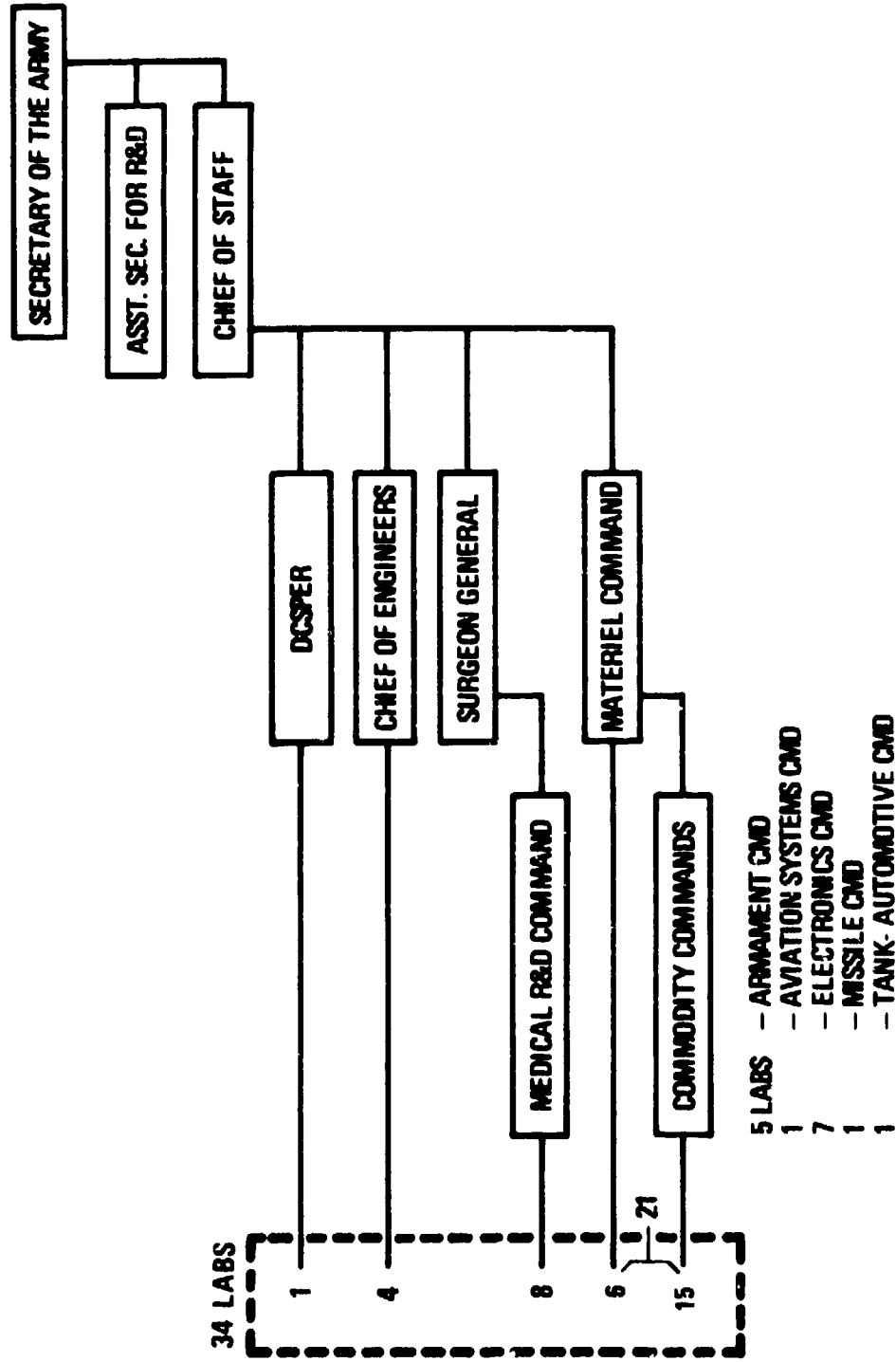
COMMAND CHAIN		
	INTERMEDIATE	COMMAND
AEROSPACE MEDICAL RESEARCH LABORATORY	--	CHIEF, BUR OF MED/SUR
AIR DEVELOPMENT CENTER	--	CHIEF OF NAVAL MATERIAL
AIR ENGINEERING CENTER	NAVAL AIR SYSTEMS COMMAND	CHIEF OF NAVAL MATERIAL
ARCTIC RESEARCH LABORATORY	--	CHIEF OF NAVAL RESEARCH
BIOMEDICAL RESEARCH LABORATORY	--	CHIEF OF NAVAL RESEARCH
BLOOD RESEARCH LABORATORY	--	CHIEF, BUR OF MED/SUR
CIVIL ENGINEERING LABORATORY	NAVAL FAC ENG COMMAND	CHIEF OF NAVAL MATERIAL
CLOTHING AND TEXTILE RESEARCH UNIT	NAVAL SUPPLY SYS COMMAND	CHIEF OF NAVAL MATERIAL
COASTAL SYSTEMS LABORATORY	--	CHIEF OF NAVAL MATERIAL
DENTAL RESEARCH INSTITUTE, NTC	--	CHIEF, BUR OF MED/SUR
ELECTRONICS LABORATORY CENTER	--	CHIEF OF NAVAL MATERIAL
ENVIRONMENTAL PREDICTION RESEARCH FACILITY	NAVAL AIR SYSTEMS COMMAND	CHIEF OF NAVAL MATERIAL
HEALTH RESEARCH CENTER	--	CHIEF, BUR OF MED/SUR
MEDICAL FIELD RESEARCH LABORATORY	--	CHIEF, BUR OF MED/SUR
MEDICAL RESEARCH INSTITUTE	--	CHIEF, BUR OF MED/SUR
MEDICAL RESEARCH UNIT NO. 2	--	CHIEF, BUR OF MED/SUR
MEDICAL RESEARCH UNIT NO. 3	--	CHIEF, BUR OF MED/SUR
MEDICAL RESEARCH UNIT NO. 5	--	CHIEF, BUR OF MED/SUR
PERSONNEL RESEARCH & DEVELOPMENT CENTER	--	CHIEF OF NAVAL MATERIAL
RESEARCH LABORATORY	--	CHIEF OF NAVAL RESEARCH
SHIP RESEARCH AND DEVELOPMENT CENTER	--	CHIEF OF NAVAL MATERIAL
SUBMARINE MEDICAL RESEARCH LABORATORY	--	CHIEF OF NAVAL MATERIAL
SURFACE WEAPONS CENTER	--	CHIEF OF NAVAL MATERIAL
UNDERSEA CENTER	--	CHIEF OF NAVAL MATERIAL
UNDERWATER RANGES DIRECTORATE	--	CHIEF OF NAVAL MATERIAL
UNDERWATER SYSTEMS CENTER	--	CHIEF OF NAVAL MATERIAL
WEAPONS CENTER	--	CHIEF OF NAVAL MATERIAL

TABLE 1C AIR FORCE RESEARCH AND DEVELOPMENT LABORATORY ORGANIZATIONAL RELATIONSHIPS

	COMMAND CHAIN	
	INTERMEDIATE	COMMAND
AEROPROPULSION LABORATORY	AF WRIGHT AERONAUTICAL LABS	AF SYSTEMS COMMAND
*ARMAMENT LABORATORY	ARMAMENT DEV & TEST CENTER	AF SYSTEMS COMMAND
AVIONICS LABORATORY	AF WRIGHT AERONAUTICAL LABS	AF SYSTEMS COMMAND
AIR FORCE GEOPHYSICS LABORATORY	--	AF SYSTEMS COMMAND
FLIGHT DYNAMICS LABORATORY	AF WRIGHT AERONAUTICAL LABS	AF SYSTEMS COMMAND
FRANK J. SEILER RESEARCH LABORATORY	AF OFFICE OF SCIENTIFIC RES.	AF SYSTEMS COMMAND
HUMAN RESOURCES LABORATORY	--	AF SYSTEMS COMMAND
MATERIALS LABORATORY	AF WRIGHT AERONAUTICAL LABS	AF SYSTEMS COMMAND
ROCKET PROPULSION LABORATORY	--	AF SYSTEMS COMMAND
ROME AIR DEVELOPMENT CENTER	ELECTRONIC SYSTEMS DIVISION	AF SYSTEMS COMMAND
SCHOOL OF AEROSPACE MEDICINE	AEROSPACE MEDICAL DIVISION	AF SYSTEMS COMMAND
WEAPONS LABORATORY	--	AF SYSTEMS COMMAND
6570 AEROSPACE MEDICAL RESEARCH LABORATORY	AEROSPACE MEDICAL DIVISION	AF SYSTEMS COMMAND

\* Laboratory portion not reported separately in this report. (For Armament Laboratory, see Armament Development and Test Center.)

# ARMY LABORATORIES COMMAND CHAIN

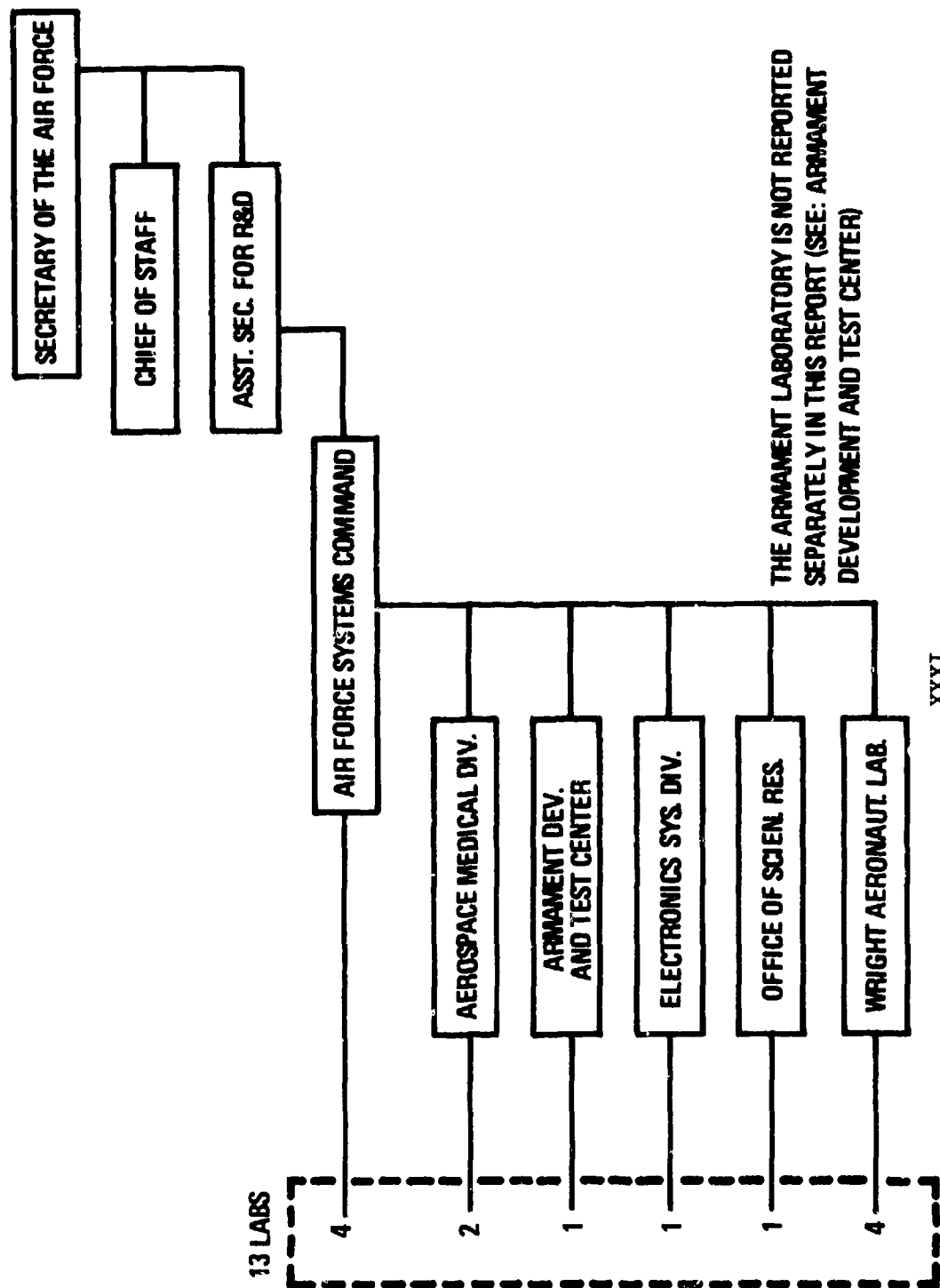


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graph TD
    SecNav[SECRETARY OF THE NAVY] --> AsstSecRND[ASST. SEC. FOR R&D]
    SecNav --> CNO[CHIEF OF NAVAL OPERATIONS]
    AsstSecRND --> CNR[CHIEF OF NAVAL RESEARCH]
    CNR --> Labs27[27 LABS]
    Labs27 --> Labs3[3]
    Labs27 --> Labs10[10]
    Labs27 --> Labs10[10]
    Labs27 --> Labs4[4]
    CNO --> CBMS[CHIEF, BUREAU OF MEDICINE AND SURGERY]
    CNO --> CNM[CHIEF OF NAVAL MATERIAL]
    CBMS --> Labs10[10]
    CNM --> Labs10[10]
    CNM --> SC[SYSTEMS COMMANDS]
    SC --> Labs4[4]
    SC --> LabSS[1 LAB - SUPPLY SYSTEMS CMD]
    SC --> LabAS[2 LABS - AIR SYSTEMS CMD]
    SC --> LabFE[1 LAB - FACILITIES ENGINEERING COMMAND]
  
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XXX

# AIR FORCE LABORATORIES COMMAND CHAIN



INSTALLATION: AEROMEDICAL RESEARCH LABORATORY

FT. RUCKER AL

CDR COL ROBERT W. BAILEY

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976	1977
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	2.303	2.202
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	1.062	1.027
TOTAL ANNUAL LAB	3.365	3.229
TOTAL INHOUSE	3.365	3.229
TOTAL INHOUSE RDT&E	2.303	2.202
ANNUAL OPERATING COST	1.055	1.066

PERSONNEL	PERSONNEL DATA (END OF FY 1976)			
	AUTHORIZED STRENGTH	TOTAL PHOS	TOTAL PROF	NON-PROF
MILITARY	58	17	23	35
CIVILIAN	57	6	17	40
TOTAL	115	23	40	75

ACRES	SPACE AND PROPERTY				COST (MILLION \$)	
	SPACE (THOUSANDS OF SQUARE FEET)				TOTAL REAL PROP	EQUIP
	LAB	ADMIN	OTHER	TOTAL		
10	52.747	7.797	23.772	84.316	0.884	7.400

#### ...MISSION

TO CONDUCT STUDIES OF ARMY AVIATION AND AIRBORNE OPER MED PROB, TO PROVIDE CONSULT SERV AS APPROP TO OTH ELEMENTS OF ARMY, AND PERFORM RSCH ON SENSORY PHYSIOLOGY REL TO EFF OF VIS AND AUDITORY STIMULI, ACCELERATION AND DECELERATION, AND OTH PHYSICAL FORCES ON SOLDIER'S MIL PERFORMANCE.

#### ...CURRENT IMPORTANT PROGRAMS

MEDICAL RESEARCH APPLIED TO THE PROBLEMS IN ARMY AVIATION. RSCH PSYCHOLOGY APPLIED TO MEDICALLY SIGNIFICANT PROBLEMS IN ARMY AVIATION. RSCH OF PSYCHOACOUSTICAL PROBLEMS MEDICALLY SIGNIFICANT TO ARMY AVIATION. DIRECT FIELD RSCH SUPPORT TO IMMEDIATE ARMY AEROMEDICAL PROBLEMS. RSCH OF VISUAL PROBLEMS MEDICALLY SIGNIFICANT TO ARMY AVIATION.

#### ...FUNCTIONS/EQUIPMENT/CAPABILITIES

MAJOR EQUIPMENT INCLUDES A SOUNDPROOF HEARING ROOM, ANECHOIC CHAMBER, COLORIMETER, ECG AND EEG MACHINES, TECHICON AUTOANALYZER, MASS SPECTROMETER, 3 DEGREE OF FREEDOM CLOSED LOOP SERVOMOTOR HYDRAULIC HELICOPTER SEAT MOUNTED SIMULATOR, SEQUENTIAL MULTIPLE ANALYZER-COMPUTERIZED, PHOTOMETRY LABORATORY, AIRBORNE MONITORING EQUIP, BIOCHEMISTRY LAB, ELECTRONICS AND ENGINEERING FABRICATION SHOP, AND PHOTOGRAPHY LABORATORY.

INSTALLATION: AIR DEFENSE BOARD

EL PASO, TEXAS

PRES COL GEORGE R. GILEO

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MIL \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RDT&E	2.477	2.328
TOTAL PROCUREMENT	0.195	0.070
TOTAL O&M	0.359	0.088
TOTAL OTHER	1.761	1.890
TOTAL ANNUAL LAB	4.792	4.376
TOTAL INHOUSE	4.792	4.376
TOTAL INHOUSE RDT&E	2.477	2.328
ANNUAL OPERATING COST	0.395	0.387

PERSONNEL	PERSONNEL DATA (END OF FY 1976)				NON-PROF
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF		
MILITARY	120	0	26		94
CIVILIAN	87	0	12		75
TOTAL	207	0	38		169

ACRES	SPACE AND PROPERTY			COST (MILLION \$)		
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
26	36.550	36.646	30.114	103.310	1.895	8.218

#### ...MISSION

PLAN, CONDUCT, & REPORT ON OPERATIONAL TEST I, OPERATIONAL TEST II, OPERATIONAL TEST III, & OTHER USER-TYPE TESTS OF AD WEAPON SYS, FIRE DISTRIBUTION SYS, ELECTRONIC COUNTER MEASURES & COUNTER-COUNTER MEASURES EQUIP & DEVICES & TARGET DEVICES. PARTICIPATE IN DT I, DT II & DT III.

#### ...CURRENT IMPORTANT PROGRAMS

CONCEPT EVALUATION OF AIR DEFENSE DECOYS  
EVALUATION OF HAWK PRODUCT IMPROVEMENT PROPOSALS  
EVALUATION OF CHAPARRAL PRODUCT IMPROVEMENT PROPOSALS (IFF)  
CONCEPT EVALUATION OF AIRCRAFT ENGAGEMENT TECHNIQUES FROM TANKS  
CONCEPT EVALUATION OF NIKE-HERCULES IN THE SURFACE-TO-SURFACE ROLE

#### ...FUNCTIONS/EQUIPMENT/CAPABILITIES

REVIEW & COMMENT ON TRAINING DEVICE REQUIREMENTS DOCUMENTS, ORGANIZATION PHASE DOCUMENTS, NEW EQUIPMENT TRAINING PACKAGES, & ASSIST IN REVIEW OF MILITARY SPECS. PROVIDE TRADOC TEST REQUIREMENTS FOR THE COORDINATED TEST PROGRAM. PLAN, DIRECT & CONTROL A PROGRAM IN TEST METHODOLOGY, TEST INSTRUMENTATION, & TEST FACILITIES NEEDED TO SUPPORT CURRENT & FUTURE TEST REQUIREMENTS WITHIN ASSIGNED MISSION AREA. SPT FIELD RESEARCH, STUDIES, TESTS, & OPERATIONS OF TRADOC, DA OR DOD AGENCIES AS REQUIRED & DIRECTED BY CG USA AIR DEFENSE CENTER & FORT BLISS.  
EQUIPMENT: ACCESS TO COMPUTER, TAC & INSTRUMENTATION RADAR, AUTOMATED DATA ACQUISITION SYSTEMS, CINETHOODCLITES, PHOTO LAB & FILM READING EQUIP. SITE MONITOR FOR ELECTRONIC TEST OF EQUIP & CONNA ANA & NORTH MCGREGOR RANGES FOR FIRING FWD AREA WPNS AT TARGET DEVICES & DRONES



INSTALLATION: AIR MOBILITY R&D LABORATORY

MOUNTAIN VIEW, CAL.

DIR DR RICHARD C. CARLSON

DEP DIR COL JOHN B. FITCH

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RD&E	47.542	38.689
TOTAL PROCUREMENT	0.698	0.396
TOTAL O&M	0.204	1.000
TOTAL OTHER	0.000	0.000
TOTAL ANNUAL LAB	48.444	40.085
TOTAL INHOUSE	13.950	15.575
TOTAL INHOUSE RD&E	13.950	15.575
ANNUAL OPERATING COST	0.582	0.589

PERSONNEL	PERSONNEL DATA (END OF FY 1976)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	27	2	17	10
CIVILIAN	586	28	276	310
TOTAL	613	30	293	320

ACRES	SPACE AND PROPERTY			COST (MILLION \$)		
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
108	85.014	43.308	15.584	143.906	1.474	5.470

#### ...MISSION

MANAGES AND EXECUTES R&D OF ARMY AIRMOBILE SYSTEMS, THROUGH DEMONSTRATION OF TECHNOLOGY. PROVIDES TECHNICAL SUPPORT TO PROJECT/PRODUCT MANAGERS & SYSTEM DEVELOPERS AS REQUIRED. PROVIDES INDEPENDENT TECHNICAL RISK ASSESSMENT TO CG USAAVSCOM AND HIGHER AUTHORITY.

#### ...CURRENT IMPORTANT PROGRAMS

RESEARCH IN FUNDAMENTAL ROTOR AERODYNAMICS, DYNAMICS & NOISE.  
RESEARCH & DEVELOPMENT OF SMALL GAS TURBINES.  
R&D TO IMPROVE RELIABILITY & MAINTAINABILITY OF AIRMOBILE SYSTEMS.  
RSCH. COMPOSITES & MATERIALS. CPNL. FLT. LEADS TO IMPROVE STRUCTURES FOR A/C  
EVOLVE TECHNOLOGY & CRITERIA TO IMPROVE FLIGHT SAFETY & SURVIABILITY.

#### ...FUNCTIONS/EQUIPMENT/CAPABILITIES

THREE DIRECTORATES AT MOFFETT FIELD CA, CLEVELAND OH, HAMPTON VA; COLOCATED WITH NASA, PARTICIPATING IN RESEARCH OF AIRMOBILE SYSTEMS & DISCIPLINES, JOINTLY USING WIND TUNNELS, SIMULATORS & LABORATORY TEST FACILITIES, INCLUDING SHOPS, FLIGHT LINE & HANGER, STRUCTURE LAB, ENGINE TEST FACILITIES & COMPUTATIONAL EQUIPMENT. FOURTH DIRECTORATE AT FORT EUSTIS VA., PERFORMING ADVANCED APPLICATIONS WORK. MAJOR EQUIPMENT & FACILITIES: FILAMENT WINDING MACHINES, TENSILE TESTERS, VIBRATION TESTER, SMALL BALLISTIC RANGE, CALIBRATION LAB, ENVIRONMENT CHAMBER, ATOMIC ABSORPTION SPECTR, TELEMETRY GROUND STATION, NON-DESTRUCT TESTING FACILITY, FLIGHT SAFETY LAB.

INSTALLATION: AIRBORNE COMMUNICATIONS & ELECTRONICS BOARD FT. BRAGG, N.C.

PRES. COL BRUCE E. WALLACE

ENGIN. ADV. MR. CHAS. SWAKINGEN

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RDT&E	1.708	1.248
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.140	0.219
TOTAL OTHER	2.201	2.375
TOTAL ANNUAL LAB	4.049	3.842
TOTAL INHOUSE	4.049	3.842
TOTAL INHOUSE RDT&E	1.708	1.248
ANNUAL OPERATING COST	0.871	0.890

PERSONNEL	PERSONNEL DATA (END OF FY 1976)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	122	0	29	93
CIVILIAN	52	1	11	41
TOTAL	174	1	40	134

ACRES	SPACE AND PROPERTY SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLION \$)		
	LAS	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
27	3.978	39.140	39.390	82.508	0.971	3.316

#### ...MISSION

THE MISSION OF THE USAACEB IS TO PLAN, CONDUCT AND REPORT ON OT I, II, AND III AND OTHER USER TYPE TESTS OF ASN, COMMUNICATIONS AND ELECTRONICS ITEMS THAT PERTAIN TO EQUIPMENT AND SYSTEMS.

FACILITIES INCLUDE: HANGAR BUILDING, COMMUNICATIONS-ELECTRONICS FACILITY

#### ...CURRENT IMPORTANT PROGRAMS

OT III MILITARY SCUBA SYSTEM  
TACTICAL SATELLITE COMMUNICATIONS MANPACK OT II  
AN/TSQ-84 UPGRADE COMM TECH CONTROL CENTER OT II  
STANDARD AIRDROP OF SELECTED ITEMS OF EQUIPMENT  
OT III MODULAR TELETYPEWRITER TERMINAL AN/UGC-74

#### ...FUNCTIONS/EQUIPMENT/CAPABILITIES

CRYPTOGRAPHIC TEST FACILITY AND WOODWORK SHOP. MAJOR EQUIPMENT INCLUDES: 5-TON WRECKER, 40,000 POUND LOADER, 20-TON MOBILE CRANE, 2 T-28 B MODEL AIRCRAFT, 1 OH-1H HELICOPTER, VARIOUS TYPES OF STANDARD PARACHUTES, NINE GASOLINE DRIVE GENERATORS, 5 DIGITAL THEODOLITES, VARIOUS THERMOMETERS, STOPWATCHES, TACTICAL RADIO SETS, RADIO RECEIVERS, SIX TELETYPEWRITER SETS, OSCILLOGRAPH, ACCELEROMETERS, 11 SIGNAL GENERATORS, 9 MULTIMETERS, 1 FREQUENCY SYNTHESIZER, ONE RANDOM NOISE GENERATOR, SIX VOLT OHM METERS, FOUR OSCILLOSCOPES, NINE ATTENUATORS, 5 AC VOLTMETERS, 1 GRAPHIC LEVEL RECORDER, 2 TRANSISTOR TESTERS, 1 MILLAMETER, 2 FREQUENCY COUNTERS, 3 SOUND LEVEL METERS, SOUND LEVEL CALIBRATORS, METER CALIBRATORS, MEGOHM-METER, Q METER, CLOSED CIRCUIT VIDEO EQUIPMENT, 1 VAN METER, ANALOG TAPE RECORDER, VARIOUS MOTION PICTURE AND STILL CAMERAS.

INSTALLATION: ARCTIC TEST CENTER

FT. GREELY, AK.

CDR COL JOHN M. FICKARTS

TECH. DIR. MR. WILLIAM J. HASLEM

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RDT&E	3.177	3.731
TOTAL PROCUREMENT	0.030	0.008
TOTAL O&M	0.000	0.000
TOTAL OTHER	2.874	3.008
TOTAL ANNUAL LAB	6.081	6.747
TOTAL INHOUSE	6.081	6.747
TOTAL INHOUSE RDT&E	3.177	3.731
ANNUAL OPERATING COST	1.901	2.000

PERSONNEL	PERSONNEL DATA (END OF FY 1976)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	269	0	60	209
CIVILIAN	22	0	9	13
TOTAL	291	0	69	222

ACRES	SPACE AND PROPERTY			COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
647155	5.100	100.079	129.152	254.331	12.474	5.699

#### ...MISSION

PLAN CONDUCT EVALUATE AND REPORT ON ENVIRON PHASES OF DEVELOPMENT TESTS  
EM LOY INTEGRATED TESTING CYCLE POLICIES DURING DEVELOPMENT TESTS-PROVID  
ADV AND GUIDANCE TO MATERIEL DEVELOPERS ET AL RE COLD REGIONS TEST/EVAL  
PROVIDE TEST SUPPORT TO DOD AND GOVERNMENT AGENCIES TAW CG TECOM DIREC

#### ...CURRENT IMPORTANT PROGRAMS

STINGER (DEVELOPMENT)  
XM198 HOWITZER  
PERSONNEL ARMOR  
COMMON THERMAL NIGHT SIGHTS  
HAND-HELD LASER RANGEFINDER

#### ...FUNCTIONS/EQUIPMENT/CAPABILITIES

FAC CAN ACCOMMODATE A WIDE VAR AND LARGE NO OF TEST ITEMS AT ANY ONE  
TIME. SEVERAL VEH TEST COURSES PLUS EXTENSIVE CROSS COUNTRY TERRAIN.  
RANGES ARE VERSATIL W 500K ACRE ISOLATED IMPACT AREA, 50KM MAX UNCHSERV  
RANGE, LARGE RESTRICTED AIRSPACE AREA W UNRESTRICTED FIRING TO 5000 FEET  
ORDINATE. COORD W LOCAL FAA CAN EFFECT UNRESTRICTED ORDINATE. 1ST 2ND OR  
3RD ORDER SURVEY POINTS. GOOD SECONDARY ROADS. TEL AND NON-TAC RADIO AT  
ALL RANGES AND TEST SITES. AUTODIN FACSIMILE TELETYPE. PHOTO LAB. MAINT  
FOR MAJORITY OF EQUIP TO INCL ACFT DS/GS CALIBRATION SERVICES. LIMITED  
ENGINEER SUPPORT UHIA ACFT AVAILABLE. AF SPT CAN BE ARRANGED. MET SPT  
AVAIL. INSTRUMENTS FOR MOST ITEMS ON HAND, CAN OBTAIN OTHER INSTRUMENTS.  
MOVING TARGET SYSTEM. REMOTE SARTS TARGET SYSTEM. EOD. STATISTICAL AND  
MAINT EVALUATION CAPABILITIES AVAIL. ADEQUATE COMPUTER FACILITIES.

INSTALLATION: ARMOR AND ENGINEER BOARD

FT. KNOX, KENTUCKY

PRES COL JIMMY L. PIGG

TECH DIR MR JAMES C. KELTON

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976	1977
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	1.967	3.519
TOTAL PROCUREMENT	0.024	0.262
TOTAL O&M	0.535	0.524
TOTAL OTHER	5.700	6.044
TOTAL ANNUAL LAB	8.226	10.349
TOTAL INHOUSE	8.226	10.349
TOTAL INHOUSE RDT&E	1.967	3.519
ANNUAL OPERATING COST	0.420	0.510

PERSONNEL	PERSONNEL DATA (END OF FY 1976)				NON-PROF
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF		
	MILITARY	181	0	176	
CIVILIAN	85	1	11	74	
TOTAL	266	1	187	79	

ACRES	SPACE AND PROPERTY			COST (MILLION \$)		
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
6900	6.200	54.455	151.508	212.163	1.419	2.345

#### ...MISSION

PLAN, CONDUCT, & REPORT ON OT TESTS I, II, & III, FORCE DEV TEST & EXP CEP, TEA & OTHER USER-TYPE TEST OF ARM & ENGR EQ, AUTOMOTIVE SYS, ATOMIC DEMOLITION MUNITIONS & GEN EQUIP, FUEL HANDLING & STORAGE EQUIP. PROVIDE ADVICE & GUIDANCE TO DEVELOPER & OTHERS. CONDUCT TEST AS DIR. BY TRADOC.

#### ...CURRENT IMPORTANT PROGRAMS

OPERATIONAL FEASIBILITY TEST, IMPROVED SUSPENSION SYSTEM, M60 SERIES TKS PDTE, TANK COMPANY TEAM NIGHT FIGHTING TEST  
 OPERATIONAL TEST II, TACTICAL SURVEY METER, AN/VDR-1.  
 FIELD EVALUATION OF M48A5 TANK PRODUCT IMPROVEMENTS.  
 EMPLOYMENT OF SMOKE AS A DEFENSE AGAINST ANTITANK WEAPONS.

#### ...FUNCTIONS/EQUIPMENT/CAPABILITIES

USAARENBD MAJOR EQUIP: SIMFIRE INSTRUMENTATION SYSTEMS, OVERHEAD CRANE-40 TON; STILL & MOTION PICTURE PHOTO EQUIP; STATIONARY ELEVATED CAMERA PLATFORM FOR HEIGHTS UP TO 40 FT ABOVE ADJACENT GRADE; VIDEO TAPE RECORDER; TARGET LOCATING SYS; MOBILE DYNAMOMETER, WHICH MEASURES DRAW BAR PULL FROM 0 TO 100 TONS; TACTICAL WHELD BEHCLES; COMBAT VEHICLES; ENGR CONSTR EQUIP; MACHINE SHOP EQUIP & SHOP MAINTENANCE SETS.  
 USAARENBD FACILITIES: 6900 ACRES AVAILABLE FOR TESTING; MC FARLAND-OLIVER RANGE (160 ACRES) WITH FIRING CAPABILITY OF UP TO 2000 METERS; ADDITIONAL RANGE, WITH FIRING CAPABILITIES UP TO 10,000 METERS, ON SPACE AVAILABLE BASIS; STILL WATER TEST AREA; 72,988 SQ FT.

INSTALLATION: ATMOSPHERIC SCIENCES LABORATORY

WHITE SANDS MR, N.M.

CDR AND DIR. COL WILLIAM C. PETTY

DEPUTY DIR. MR. HENRY RACHELE

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RDT&E	13.073	13.223
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.044	0.200
TOTAL OTHER	0.057	0.000
TOTAL ANNUAL LAB	13.174	13.423
TOTAL INHOUSE	10.688	10.315
TOTAL INHOUSE RDT&E	10.587	10.115
ANNUAL OPERATING COST	2.581	5.198

PERSONNEL	PERSONNEL DATA (END OF FY 1976)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	440	0	22	418
CIVILIAN	225	14	104	121
TOTAL	665	14	126	539

ACRES	SPACE AND PROPERTY			COST (MILLION \$)		
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
45	51.000	3.100	3.600	57.700	48.000	22.000

#### ...MISSION

RESEARCH IN ATMOSPHERIC SCIENCES, DEVELOPMENT OF METEOROLOGICAL TECHNIQUES AND EQUIPMENT FOR FIELD ARMY. FURNISH METEOROLOGICAL SERVICES TO ARMY RDT&E ACTIVITIES. PROVIDE ADMIN AND LOGISTICAL SUPPORT TO OTHER ECOM ELEMENTS AT WHITE SANDS MISSILE RANGE, NEW MEXICO

#### ...CURRENT IMPORTANT PROGRAMS

METEOROLOGICAL EQUIPMENT  
AUTOMATIC METEOROLOGICAL SYSTEM  
REMOTE SENSING  
METEOROLOGICAL SATELLITES  
METEOROLOGICAL SUPPORT TO RDT&E ACTIVITIES

#### ...FUNCTIONS/EQUIPMENT/CAPABILITIES

METEOROLOGICAL RESEARCH FACILITY AND CAPABILITY  
WIND TUNNEL FACILITY, LOW SPEED  
ATMOSPHERIC PHYSICS RESEARCH FACILITY AND CAPABILITY  
UPPER ATMOSPHERE RESEARCH AND SOUNDING ROCKET FACILITY AND CAPABILITY  
ION MASS SPECTROMETER SYSTEM  
METEOROLOGICAL SOUNDING ROCKET FACILITIES-N.M.,UTAH,ALASKA, CANAL ZONE  
REMOTE ATMOSPHERIC SENSING FIELD RESEARCH FACILITY  
ATMOSPHERIC SPECTROSCOPY-LASER PROPAGATION FACILITY  
METEOROLOGICAL RDT&E SUPPORT FACILITIES - ALASKA TO CANAL ZONE  
METEOROLOGICAL INSTRUMENTATION TEST, MAINTENANCE, CALIBRATION FACILITY  
FACILITY FOR SONIC OBSERVATION OF TRAJECTORY AND IMPACT OF MISSILES  
SATELLITE CALIBRATION FACILITIES

INSTALLATION: AVIATION ENGINEERING FLIGHT ACTIVITY

EDWARDS AFB CA

CDR. COL DENNIS M BOYLE

TTECH DIR MR JAMES S. HAYDEN

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RDT&E	4.030	3.845
TOTAL PROCUREMENT	0.000	0.000
TOTAL C&M	0.000	0.000
TOTAL OTHER	0.000	0.000
TOTAL ANNUAL LAB	4.030	3.845
TOTAL INHOUSE	4.030	3.845
TOTAL INHOUSE RDT&E	4.030	3.845
ANNUAL OPERATING COST	1.242	1.383

PERSONNEL	PERSONNEL DATA (END OF FY 1976)				NON- PROF
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF		
MILITARY	56	0	30		26
CIVILIAN	104	0	34		70
TOTAL	160	0	64		96

ACRES	SPACE AND PROPERTY SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
19	4.280	32.830	98.490	135.600	3.614	6.629

...MISSION

PLAN AND CONDUCT AIRWORTHINESS QUALIFICATION FLIGHT TESTS OF AIR VEHICLES DEVELOPED AND/OR PROCURED AIRWORTHINESS EVAL OF VEHICLES PROPOSED FOR ARMY APPLICATION INCORPORATE ADVANCED CONCEPTS PRODUCE DATA ACFT PERF STAB AND CONTROL CONDUCT TEST PILOT ORIENTATION COURSE

...CURRENT IMPORTANT PROGRAMS

APE FOR IMPROVED ROTOR BLADE COBRA TOW  
UTTAS ICING TEST  
AHIS FLAT PLATE EVAL  
XV-15 TILT ROTOR EVAL  
UTTAS AND AAH FOLLOW-ON

...FUNCTIONS/EQUIPMENT/CAPABILITIES

IF51D 3T28B 1RU21D 1JGVIC 1JAH1G 1JCH47C 1CH5RA 3JUH1H AND 9 TEST ACFT  
AIRCRAFT MAINT CAPABILITY  
AIRCRAFT MODIFICATION CAPABILITY  
EMR COMPUTER WITH TELEMETRY  
8AIRBORNE DATA ACQUISITION SYSTEMS  
3REMOTE GROUND STATIONS WITH COMPUTER AND TELEMETRY CAPABILITY  
LIMITED INSTRUMENTATION CAPABILITY  
12MILIKEN CAMERA VARIOUS SIZES  
1FAIRCHILD FLIGHT ANALYZER  
1MAGNETIC TAPE COMPOSER SYSTEM  
3MAGNETIC TAPE SELETRIC TYPEWRITERS 2MAGCARD TYPEWRITERS  
2HEADLINER MODELS 820 AND 860

INSTALLATION: AVIATION TEST BOARD

FT. RUCKER, AL.

PRES COL ROBERT A. BONIFACIO

TECH DIR MR GEORGE E. SLAGLEY

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RDT&E	6.141	0.000
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	0.000	0.000
TOTAL ANNUAL LAB	6.141	0.000
TOTAL INHOUSE	5.931	0.000
TOTAL INHOUSE RDT&E	5.931	0.000
ANNUAL OPERATING COST	0.210	0.000

PERSONNEL	PERSONNEL DATA (END OF FY 1976)				NON- PROF
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF		
MILITARY	76	0	20		56
CIVILIAN	36	1	7		29
TOTAL	112	1	27		85

ACRES	SPACE AND PROPERTY (THOUSANDS OF SQUARE FEET)			COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
1189	2.440	50.584	177.364	230.388	2.623	19.286

...MISSION

MISSION: THE CONDUCT OF OPERATIONAL TEST I,II,III, FOR NON-MAJOR SYSTEMS AND OTHER TESTS AS DIRECTED BY HEADQUARTERS TRADOC. SPECIFICALLY, THE AVIATION BOARD DESIGNS AND CONDUCTS TESTING AND EVALUATION OF AVIATION SYSTEMS, SUBSYSTEMS AND ANCILLIARY EQUIPMENT

...CURRENT IMPORTANT PROGRAMS

CH-47 OPERATIONAL FLIGHT TRAINER  
AIRCRAFT GEN PURP DISP XM-130  
COUNTERMEASURES SET FOR AH-1/UH-1 AND OH-58  
AN/APR-39(V)1 RECEIVER  
AH-1S MAIN ROTOR BLADE

...FUNCTIONS/EQUIPMENT/CAPABILITIES

NO MAJOR EQUIPMENT OR FACILITY CAPABILITY

INSTALLATION: AVIONICS LABORATORY

FT MONMOUTH NJ

DIR COL DARWIN A PETERSEN

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RD&E	10.605	11.090
TOTAL PROCUREMENT	3.461	4.718
TOTAL O&M	2.018	2.006
TOTAL OTHER	0.000	0.000
TOTAL ANNUAL LAB	16.084	17.814
TOTAL INHOUSE	11.382	9.770
TOTAL INHOUSE RD&E	7.195	6.023
ANNUAL OPERATING COST	4.013	4.033

PERSONNEL	PERSONNEL DATA (END OF FY 1976)			NON- PROF
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	
MILITARY	12	0	6	6
CIVILIAN	183	4	129	54
TOTAL	195	4	135	60

ACRES	SPACE AND PROPERTY SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
0	25.742	30.108	0.000	55.850	0.000	12.139

...MISSION

APPLIED RES DEV AND ENGRG IN ARMY AVIATION ELECTRONICS INCLUDING  
NAVIGATION, LANDING, COMMUNICATIONS, ENVIRONMENT SENSING CONTROL THEORY.  
AIRCRAFT ANTENNAS INSTRUMENTATION GROUND AND AIRBORNE SYSTEMS  
INSTALLATION AND TEST SYSTEMS ENGINEERING

...CURRENT IMPORTANT PROGRAMS

LOW LEVEL NIGHT OPERATIONS FOR ARMY AIRCRAFT  
NATIONAL MICROWAVE LANDING SYSTEM  
ABSOLUTE ALTIMETER  
MAP OF THE EARTH COMMUNICATIONS SYSTEM  
DIGITAL MODULAR AVIONICS

...FUNCTIONS/EQUIPMENT/CAPABILITIES

TACTICAL AVIONICS SYSTEMS SIMULATOR  
AIRCRAFT ANTENNA TEST FACILITY  
FIXED BASE COCKPIT SIMULATOR UH-1  
INSTRUMENTED C-47 AIRCRAFT FOR TESTING NAVIGATION SYSTEMS  
GYRO TEST FACILITY  
MOVING EARTH SIMULATOR FOR DOPPLER NAVIGATION TESTING  
ELECTROMAGNETIC RADIATION TEST FACILITY  
ELEVATED ROTABLE HELIPORT  
ATMS DESIGN TEST CENTER  
ENVIRONMENTAL VEHICAL FOR FOR AVIONICS RESEARCH



INSTALLATION: BALLISTICS RESEARCH LABORATORIES

ABERDEEN PROV GR, MD.

DIR DR ROBERT J. EICHELBERGER

DEP DIR COL ROBERT M. GOMEZ

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RD&E	38.031	41.533
TOTAL PROCUREMENT	1.560	0.000
TOTAL O&M	0.443	0.120
TOTAL OTHER	1.374	1.644
TOTAL ANNUAL LAB	41.410	43.297
TOTAL INHOUSE	30.405	29.747
TOTAL INHOUSE RD&E	27.545	28.033
ANNUAL OPERATING COST	10.600	9.700

PERSONNEL	PERSONNEL DATA (END OF FY 1976)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	27	0	42	15
CIVILIAN	777	107	439	338
TOTAL	804	107	481	353

ACRES	SPACE AND PROPERTY			TOTAL	COST (MILLION \$)	
	LAB	ADMIN	OTHER		REAL PROP	EQUIP
1920	537.624	20.103	34.157	591.884	40.462	29.998

### ...MISSION

CONDUCT RES AND EXPL DEVL IN SCIENCES/TECHNOLOGIES NECESSARY FOR  
CONCEIVING DESIGNING DEVELOPING AND EVALUATING WEAPONS SYSTEMS  
PURSUE ORIENTED FUND RESEARCH IN PHYSICS CHEM MATH ENGR  
INVESTIGATE PERTINENT BRANCHES OF MILITARY SCIENCE AND TECHNOLOGIES

### ...CURRENT IMPORTANT PROGRAMS

PROPULSION DYNAMICS OF GUN WEAPON SYSTEMS  
CONVENTIONAL NUCLEAR/WARHEAD EFFECTS AND BALLISTICS PROTECTION  
WARHEAD DYNAMICS PENETRATION, FRAGMENTATION, EXPLOSIVE METAL INTERACTIONS  
REFINED FLIGHT DYNAMICS OF PROJECTILES AND MISSILES  
VULNERABILITY/VULNERABILITY REDUCTION MATERIEL GROUND AND AIRBORNE

### ...FUNCTIONS/EQUIPMENT/CAPABILITIES

SUPERSONIC AND HYPERSONIC WIND TUNNELS/TRANSONIC RANGE  
EXPLOSIVE BLAST CHAMBERS AND HIGH ALTITUDE BLAST SPHERE  
SHOCK TUBES-SIMULATION OF NUCLEAR BLAST/CHEMICAL REACTION RATE  
SOFT RECOVERY SYST FOR ARTY SHELL  
FIELD TEST FACILITIES FOR EXPLOSIVES AND ARMOR RESEARCH  
HIGH SPEED MOTION PHOTOGRAPHY SCHLIEREN INTERFEROMETRY  
ELECTRON MICROSCOPE-ELECTRON SPIN RESONANCE-NUCLEAR MAGNETIC RESEARCH  
ELECTROMAGNETIC RADIATION RANGES  
ANALOG COMPUTER FOR SIMULATION OF DYNAMICS OF GUN AND RIFLE  
PROPULSION AND COMBUSTION CHAMBERS  
FLASH HOLOGRAPHIC SYSTEMS  
AFTER GLOW REACTION CHAMBER-UPPER ATMOSPHERE CHEM REACTION RATE

INSTALLATION: BENET WEAPONS LABORATORY

WATERVLIET, N.Y.

CDR COL C.M. MATTHEWS JR

TECH DIR DR. ROBERT E. WEIGLE

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RDT&E	10.093	6.284
TOTAL PROCUREMENT	4.650	4.522
TOTAL O&M	1.917	2.647
TOTAL OTHER	0.225	0.425
TOTAL ANNUAL LAB	16.865	13.878
TOTAL INHOUSE	13.922	13.878
TOTAL INHOUSE RDT&E	7.130	6.234
ANNUAL OPERATING COST	4.403	4.282

PERSONNEL	PERSONNEL DATA (END OF FY 1976)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	5	0	5	0
CIVILIAN	377	41	178	199
TOTAL	382	41	183	199

ACRES	SPACE AND PROPERTY SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
4	167.463	24.600	7.489	199.552	4.018	6.663

#### ...MISSION

DESIGN & DEV OF ARTY, TANK, AIR DEFENSE & SECONDARY CANNON ABOVE 20MM  
 SYS MGMT, DESIGN & DEV OF MORTARS & RECOILLESS RIFLE SYSTEMS  
 ARMCOM LEAD LAB FOR BARREL & CANNON SUPT & SUPT PHYS & ENGRNG SCIENCES TECH  
 BASIC & APPL. RESEARCH & MFG TECH TO SUPT THE DEVELOPMENT MISSION

#### ...CURRENT IMPORTANT PROGRAMS

SYS MGMT LT WT CO MORTAR SYS, DEV OF 60MM MORTAR XM224 FOR LWCMS  
 DESIGN & DEV OF 105MM HOW XM205 FOR 105MM TOWED HOW S.R. XM204  
 DESIGN & DEV OF CANNON 155MM HOW XM199 FOR 155MM HOW XM198 ON TUBES  
 HI PRESS & CRYOGENIC EQUIP—OVER 300KB AT 10K & 400KB AT AMBIENT TEMP—  
 HIGHEST IN US—RESULT OF ULTRA HI PRESS TECH FOR SYNTHESIS OF NEW MATLS

#### ...FUNCTIONS/EQUIPMENT/CAPABILITIES

UNIQUE FACILITIES & CAPABILITIES INCLUDE HI PRESSURE METALLURGY WITH 2-  
 80K HYDROSTATIC, 1-150K HYDROSTATIC, 1-200K STATIC, 1-DUAL PRES (100K & 60K)  
 HYDRAULIC FATIGUE SYSTEM & 20-30K BAR FLUID EXTRUSION PRESS—FULL SCALE  
 WEAPON COMPONENTS DYNAMIC TESTER BY PRESSURE/PULSE SIMULATED FIRING LOAD  
 DIM. STRESS ANALYSIS PHOTOELASTICITY SYS—ENCLOSED PROOF RANGE—40MM MAX—  
 ELECTRON MICROSCOPE—2.3 A RESOLUTION—SEM MICROSCOPE WITH 100 A RES.  
 CRYOGENIC (4 K) 600K BAR HI PRESS SYS—1200 LB—1500 G HI-PERF SHOCK TEST  
 HI-TEMP VAC FCE—3000 C MAX, TIME OF FLIGHT MASS SPEC, 2000 GAUSS MAGNET—  
 ELECTROPLATE, ANODIZE & TITANIUM HARD COAT PROCESS, ELECTRON MICROPROBE ANAL  
 IBM 360-44 COMPUTER W/ GRAPHIC & INTEGRAPHIC TERMINAL SYS. AUTOMATED XRAY  
 ACQUISITION—ANAL—SYS. FILAMENT WOUND METAL MATRIX PLASMA SPRAY ASSY.  
 ELECTRONICALLY CONTROLLED PROGRAMMABLE ORGANIC COMPOSITE FILAMENT WINDER

INSTALLATION: COLD REGIONS R&E LABORATORY

HANOVER, NH

CDR AND DIR COL ROBERT L. CROSBY

TECH. DIR. DR. D.P. FREITAS

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL ROT&E	6.090	7.888
TOTAL PROCUREMENT	0.000	0.000
TOTAL C&M	0.402	0.297
TOTAL OTHER	2.614	2.596
TOTAL ANNUAL LAB	9.106	10.781
TOTAL INHOUSE	6.803	7.940
TOTAL INHOUSE ROT&E	4.748	5.589
ANNUAL OPERATING COST	1.889	2.063

PERSONNEL	PERSONNEL DATA (END OF FY 1976)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	13	0	7	6
CIVILIAN	276	26	98	178
TOTAL	289	26	105	184

ACRES	SPACE AND PROPERTY			COST (MILLION \$)		
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
24	17.230	6.168	97.646	121.044	4.789	6.278

### ...MISSION

AS THE ARMY LABORATORY FOR SCIENCE AND TECHNOLOGY IN COLD REGIONS, USACRREL CONDUCTS AND COORDINATES RESEARCH APPLICABLE TO THE ARMY'S NEEDS IN THOSE GEOGRAPHIC AREAS OF THE WORLD WHERE COLD REPRESENTS A SEVERE PROBLEM AT LEAST ONE YEAR IN TEN.

### ...CURRENT IMPORTANT PROGRAMS

DESIGN, CONSTRUCTION, AND OPERATIONS TECHNOLOGY FOR COLD REGIONS  
RESEARCH IN SNOW, ICE, AND FROZEN GROUND  
MOBILITY AND ENVIRONMENTAL RESEARCH  
LAND TREATMENT OF WASTEWATER  
ICE ENGINEERING

### ...FUNCTIONS/EQUIPMENT/CAPABILITIES

THE MAIN LABORATORY AT USACRREL CONTAINS 24 COLD LABS (WHICH CAN BE OPERATED TO -58 F), SPECIAL TESTING APPARATUS FOR FROZEN MATERIALS, A CHEMISTRY LAB, AN ELECTRON MICROSCOPE LAB, A SOILS PROCESSING LAB, A PAVEMENT TEST FACILITY FOR TESTING UNDER FREEZING : THAWING CONDITIONS, A WASTEWATER TREATMENT RESEARCH FACILITY, A COMPUTER FACILITY, A MASS SPECTROMETER, A GAS CHROMATOGRAPH, AND A SMALL LASER FACILITY. AN ALASKA PROJECTS OFFICE AT FAIRBANKS CONDUCTS RESEARCH AND PROVIDES LOGISTIC SUPPORT FOR OTHER RESEARCH. USACRREL'S MILITARY AND CIVILIAN PERSONNEL HAVE EXPERTISE COVERING A WIDE RANGE OF SCIENTIFIC AND ENGINEERING DISCIPLINES RELATED TO COLD REGIONS RESEARCH.

INSTALLATION: COMBAT SURVEILLANCE & TGT ACQUISITION LABS FT. MONMOUTH, N.J.

DIR COL WINSTON K. EVANS

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RDT&E	28.077	25.782
TOTAL PROCUREMENT	4.132	0.000
TOTAL O&M	0.537	0.000
TOTAL OTHER	0.000	0.000
TOTAL ANNUAL LAB	32.746	25.782
TOTAL INHOUSE	14.639	11.031
TOTAL INHOUSE RDT&E	12.303	11.031
ANNUAL OPERATING COST	4.500	4.725

PERSONNEL	PERSONNEL DATA (END OF FY 1976)				NON-PROF
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF		
MILITARY	11	0	9		2
CIVILIAN	240	12	153		87
TOTAL	251	12	162		89

ACRES	SPACE AND PROPERTY SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
227	88.475	6.139	12.569	107.183	3.950	15.848

#### ...MISSION

DO R&D OF EQUIPMENT FOR COMBAT SURVEILLANCE, TARGET ACQUISITION, IFF AND RADIOLOGICAL SURVEY, APPLYING TECHNOLOGY IN RADAR, ELECTRO-OPTICS, PARTICULARLY LASERS, PHOTOGRAPHY, REMOTE SENSING, ACOUSTICS, RADIATION DETECTION & MEASUREMENT, & IFF. ACT AS DARCOM LEAD LAB ON LOW ENERGY LASERS

#### ...CURRENT IMPORTANT PROGRAMS

ADV DEV CONCEPT FEASIBILITY OF STAND OFF TARGET ACQUISITION SYS (SOTAS)  
ENGR DEV OF ARMY INFLIGHT DATA TRANSMISSION SYSTEM (AIDATS)  
ENGR DEV OF LASER DESIGNATOR TRACKER SYSTEM (LDTS)  
ENGR DEV OF LIGHT WEIGHT SURVEILLANCE RADAR AN/PPS-15  
ENGR DEV OF HANDHELD LASER RANGEFINDER AN/GVS-5

#### ...FUNCTIONS/EQUIPMENT/CAPABILITIES

PHOTO PROCESSING, OPTICAL TEST, LENS RESOLUTION TEST PATTERN FACILITIES INCL, DARK ROOMS, CHEM LABS, RADAR TECHNIQUES DEV FAC, MI CROWAVE DARK ROOM, ANTENNA PATTERN & TEST RANGE, 65 FOOT RADAR TEST PLATFORM, OUTDOOR AND INDOOR RANGES INSTRUMENTED FROM 30 MHZ TO 70 GHZ. MOBILE SPECTRAL AND TIME DISTRIBUTION MEASUREMENT FAC GOOD FROM 2900A TO INTERMEDIATE. OPTICS FACILITY FOR MEASURING DETECTIVITY OF ELEMENTS, OUTPUT OF SOURCES, TRANSMISSION CHARACTERISTICS. SPECIAL LASER TEST AND MEASUREMENT FAC, INCLUDING A 3.4 KM LONG AND 18 METER WIDE RANGE EQUIPPED WITH TWO HIGH RESOLUTION TARGET TO EVALUATE LASER RANGEFINDING, DESIGNATING AND TRACKING SYSTEMS. RADAR INSTRUMENTATION FAC CAPABLE OF TRACKING X-BAND RADAR AND COLLECTING AND RECORDING POSITION, VELOCITY AND SIGNAL STRENGTH, ALSO HAS SHORT RANGE SEARCH CAPABILITY.

INSTALLATION: COMMUNICATIONS ADP LABORATORY

FT. MCNMOUTH, N.J.

COR COL D.A. SLINGERLAND

DEP DIR MR P.P. RIEHS

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RDT&E	18.185	16.715
TOTAL PROCUREMENT	2.350	1.905
TOTAL O&M	2.825	0.794
TOTAL OTHER	0.000	0.000
TOTAL ANNUAL LAP	23.360	19.414
TOTAL INHOUSE	14.092	13.779
TOTAL INHOUSE RDT&E	14.977	11.080
ANNUAL OPERATING COST	3.250	3.500

PERSONNEL	PERSONNEL DATA (END OF FY 1976)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	12	1	7	5
CIVILIAN	361	16	255	106
TOTAL	373	17	262	111

ACRES	SPACE AND PROPERTY			COST (MILLION \$)		
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
0	41.000	48.000	1.000	90.000	0.000	12.019

#### ...MISSION

TO PERFORM R&D ACTIVITIES RELATED COMMUNICATIONS EQUIPMENTS AND SYSTEMS WHICH INCLUDE THE FIELDS OF RADIO TELEPHONIC TELEGRAPHIC AND FACSIMILE COMMUNICATIONS SWITCHING DATA STORAGE COMMUNICATIONS SECURITY ELECTRO-MAGNETIC COMPATIBILITY AND COMMUNICATING PROCESSES

#### ...CURRENT IMPORTANT PROGRAMS

SINGLE CHANNEL GROUND AND AIRBORNE RADIO SYSTEM (SINCGARS)  
 RADIO SET AN/PRC 70  
 ATACS TSQ-85 TSQ-84A TD-1065 TD-1069 MX-9331 SB-3614 TD-206  
 MSCS AN/TTC-39 DIGITAL GROUP MULTIPLEXERS TENLEY UNIT-LEVEL-SWITCHBOARD  
 PATRIOT COMMUNICATION RELAY GROUP

#### ...FUNCTIONS/EQUIPMENT/CAPABILITIES

TEST INSTRUMENTS AND SPECIALIZED ELECTRONIC MECHANICAL AND OPTICAL EQUIPMENT TO PERFORM DESIGN FABRICATION AND TESTING OF ELECTRONIC CIRCUIT COMPONENTS EQUIPMENTS IN PRINTING SPEECH NARROW AND WIDE BAND RADIOS FROM LOW TO LASER FREQUENCY RANGE CONVENTIONAL AND ADVANCED MULTIPLEXING SWITCHING ERROR DETECTION AND CODING ANTENNA AND PROPAGATION TECHNOLOGIES FIXED AND MOBILE TACTICAL RADIO MODEM MULTIPLEXING SWITCHING EQUIPMENTS TO SIMULATE FIELD CONFIGURATIONS FOR TEST DATA COLLECTION AND EVALUATION OF EXISTING EQUIPMENT PROPAGATION INTERFACE PROBLEMS ANTENNA TEST FACILITY AND SHIELDED ROOMS FOR MEASURING OF AND ESTABLISHING DOD STANDARDS FOR ELECTROMAGNETIC COMPATIBILITY RADIATION AND PROPAGATION IONOSPHERIC SOUNDING FACILITY (DIGITAL IONOSCND) FOR REAL TIME CONTINUOUSLY-UPDATED IONOSPHERIC PREDICTIONS

INSTALLATION: CONSTRUCTION ENGINEERING RESEARCH LABORATORY URBANA, IL.

CDR AND DIR COL J.E. HAYS

TECH DIR DR L.R. SHAFFER

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RDT&E	13.107	11.422
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	1.624	0.645
TOTAL OTHER	0.266	0.095
TOTAL ANNUAL LAB	14.997	12.162
TOTAL INHOUSE	12.132	7.389
TOTAL INHOUSE RDT&E	11.183	7.016
ANNUAL OPERATING COST	1.663	1.386

PERSONNEL	PERSONNEL DATA (END OF FY 1976)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	3	0	3	0
CIVILIAN	209	27	108	101
TOTAL	212	27	111	101

ACRES	SPACE AND PROPERTY			TOTAL	COST (MILLION \$)	
	SPACE (THOUSANDS OF SQUARE FEET)	LAB	ADMIN		OTHER	REAL PRCP
30	76.081	34.159	0.000	110.240	3.896	4.067

...MISSION

PLAN, EXECUTE, AND EVALUATE RESEARCH TO OBTAIN THE BEST COMBINATION OF ENGINEERING, DESIGN, CONSTRUCTION, OPERATION & MAINTENANCE TO PROVIDE FACILITIES FOR THE MILITARY ESTABLISHMENT AND OTHER AGENCIES AT LEAST COST AND TO DISSEMINATE THE RESEARCH RESULTS.

...CURRENT IMPORTANT PROGRAMS

MATERIALS RESEARCH AND DEVELOPMENT FOR MILITARY CONSTRUCTION  
 ENVIRONMENT QUALITY FOR CONSTRUCTION & OPERATION OF MILITARY FACILITIES  
 DEVELOPMENT OF INDUSTRIALIZED CONSTRUCTION FOR MILITARY FACILITIES  
 DEVELOPMENT OF AUTOMATED PROCEDURES FOR MILITARY CONSTRUCTION  
 ARCHITECTURAL RESEARCH AND DEVELOPMENT FOR MILITARY FACILITIES

...FUNCTIONS/EQUIPMENT/CAPABILITIES

CONTROLLED ENVIRONMENT CHAMBER, ONE MILLION POUND CLOSED LOOP MATERIALS TEST SYSTEM, SCANNING ELECTRON MICROSCOPE, 5MW RESISTANCE LOAD BANK AND INSTRUMENTATION, X-RAY EQUIPMENT, SEMI-AUTOMATIC WELDING EQUIPMENT, BIAXIAL SHOCK TEST MACHINE, NON-DESTRUCTIVE TESTING FACILITY, VACUUM INDUCTION FURNACES, METALLOGRAPHIC SAMPLE PREPARATION AND RESEARCH METALLOGRAPH X-RAY DIFFRACTION AND VACUUM SPECTROSCOPY SYSTEM, DYNAMIC TENSION ANALYSIS SYSTEM, DIGITAL RECORDING ANALYSIS EQUIPMENT  
 FACILITIES CAPABILITIES INCLUDE SYSTEMS BUILDING METHODS AND TECHNIQUES, COMPUTER BASED DESIGN AND CONSTRUCTION MANAGEMENT TECHNIQUES, HARDENED FACILITIES ANALYSIS, ENVIRONMENTAL QUALITY MANAGEMENT, POLLUTION CONTROL AND ABATEMENT, MILITARY HOUSING SYSTEMS, POWER GENERATION SYSTEMS, UTILITIES SYSTEMS ANALYSIS AND EVALUATION, AND ARCHITECTURAL RESEARCH.

INSTALLATION: DUGWAY PROVING GROUND

DUGWAY UT

CDR COL ADALBERT E. TOEPEL, JR

SCIENTIFIC DIR. MR. M.A. ROTHENBERG

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RDT&E	11.718	14.317
TOTAL PROCUREMENT	0.220	0.101
TOTAL O&M	3.525	3.134
TOTAL OTHER	4.094	4.253
TOTAL ANNUAL LAB	19.557	21.805
TOTAL INHOUSE	16.844	18.134
TOTAL INHOUSE RDT&E	9.849	11.431
ANNUAL OPERATING COST	0.835	0.854

PERSONNEL	PERSONNEL DATA (END OF FY 1976)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	173	3	33	140
CIVILIAN	636	17	175	461
TOTAL	809	20	208	601

ACRES	SPACE AND PROPERTY SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
840909	90.728	191.558	1680.346	1962.632	51.237	16.086

...MISSION

DPG PLANS & CONDUCTS APPROVED TESTS TO ASSESS THE MILITARY VALUE OF CML WEAPONS, SMOKE/OBSCURANTS & CML-BIO DEF SYS. TESTS SPT R&D & PROVIDE BASIS FOR DEVELOPMENT OF NEW OPERATIONAL & LOGISTICAL CONCEPTS FOR EMPLOYMENT OF TESTED SYS. TESTS ARE RESPONSIVE TO USER REQUIREMENTS.

...CURRENT IMPORTANT PROGRAMS

CONDUCTS SERVICE DEV CML CML-BIO DEFENSE SMOKE/OBSCURANT TEST PROGRAMS  
CONDUCTS R & D & LAB INVESTIGATIONS NECESSARY TO SUPPORT MISSION  
CONDUCTS JT OP CML & CML-BIO DEFENSE TESTS/STUDIES FOR CINCS, SERVICES  
CONDUCTS PROG TO SUP ARMY POLL ABATEMENT HAZARD EVAL & DEMIL OPNS  
CONDUCTS ECOLOGICAL EPIDEMIOLOGICAL & TOXICOLOGICAL SURVL OF DPG AREA

...FUNCTIONS/EQUIPMENT/CAPABILITIES

INST GRIDS FOR CML CML-BIO TESTS; ARTY PG FOR CONVL & CML METAL PARTS, BALLISTIC & DISSEM TESTS; WITH FIELD SMPL, SMPL MASS ANAL, MET (AUTO DATA ACQ & MESOMET NETWK) SYS. TSPI (RADAR SLAVE PHOTO) SYS; PHYS & ENVIRON TEST FAC (MIL SPEC 810) CHAMBERS FOR TOTAL AGENT CONTAINMENT; EXPLO SHIELDING PROPAGATION & OVERPRESSURE MEASMENTS, OPNS SPTD BY MET RSCH ON BEHAVIOR OF CLOUDS; CML, LIFE SCI TECHN, ECOL SURV OF DPG; CAPBL FOR PLANNING ANAL, EVAL OF TESTS, OPNS RSCH; LABS EQUIPD FOR WIDE RNG OF CML, MICROBIOL, TOXICOL, IMMUNOL, ECOL, EPIDEMIO, POLL CNTL STUDIES; CAPBL FOR REAL BIO SIMUL AG; TECHN & MASS ASSAY OF FLUORESCENT AIR TRACERS; EXTENSV COMM & RG SAFETY SYS. OUTSTANDING ARE LARGE LAND AREA, RESTRICTED AIR SPACE LONG & FLAT ARTY RANGES, PROJECTILE RECOVERY, SONIC & ELECTROMAG STERILITY, DIVERSE SKILLS.

INSTALLATION: EDGEWOOD ARSENAL LABORATORIES

EDGEWOOD ARSENAL, MD.

CDR COL STAFFORD R. BROOKE

TECH DIR DR BENJAMIN L. HARRIS

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RDT&E	48.651	54.320
TOTAL PROCUREMENT	10.700	4.000
TOTAL O&M	4.754	2.923
TOTAL OTHER	1.575	1.500
TOTAL ANNUAL LAB	65.680	62.743
TOTAL INHOUSE	60.537	49.630
TOTAL INHOUSE RDT&E	43.508	41.207
ANNUAL OPERATING COST	17.159	18.352

PERSONNEL	PERSONNEL DATA (END OF FY 1976)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	126	30	82	44
CIVILIAN	824	55	460	364
TOTAL	950	85	542	408

ACRES	SPACE AND PROPERTY			COST (MILLION \$)		
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
2000	501.312	124.180	98.595	724.087	17.103	15.494

### ...MISSION

CLASS II ACTIVITY CONDUCTING A RESEARCH AND DEVELOPMENT MISSION FOR ARMY CHEMICAL MUNITIONS AND DEFENSIVE ITEMS. INCLUDES BASIC RESEARCH AND GENERAL INVESTIGATIONS, AS WELL AS EXPLORATORY, ADVANCED AND ENGINEERING DEVELOPMENT OF MATERIAL.

### ...CURRENT IMPORTANT PROGRAMS

DEV SMOKE/AEROSOL MUN FOR SCREENING : FORM OF SMOKE/AEROSOL TECH BASE  
IMMUNO-PROPHYLAXIS AGAINST LETHAL CHEMICAL AGENTS  
BIOLOGICAL AND CHEMICAL AGENT ALARM DEVELOPMENT  
NEW PROTECTIVE MASK DEVELOPMENT  
BINARY LETHAL CHEMICAL AGENT PROJECTILE DEVELOPMENT

### ...FUNCTIONS/EQUIPMENT/CAPABILITIES

TOX EFFECTS CML AGT, MED PROPHYLAXIS, TREAT; CML DECON: CONTAM AVOID CML  
PROT TECH, CML SAFETY INVEST, CML DETECT, ID TECH, CML ALARM TECH, CML  
TRNG AGTS. EQMT, DEF AGST BIO ATCK, CML THREAT ASMT TECH, GENERAL  
CML INVEST, DISSEM, DISPER TECH, LETH CML AGT/WPN, INCAP CML AGT, SMOKE,  
CIVIL DISTURBANCE, TACTICAL IRRITANT, FLAME: INCENDIARY WPNS. ENVIRON-  
MENTAL QUALITY CONTROL TECHNOLOGY: RESRCH IN DEFENSIVE SYSTEM FOR CW/BW.  
MAJOR EQUIP IS CONTAINED IN A COMPLEX OF ENGR, LAB AREAS, INCLUDES CML  
PILOT PLANTS-MUN FILLING-ENGR DESIGN, EXPER FAB SHOPS, AEROSOL DISSEM  
TEST CHAMBERS, PYROTECH MIXING-LOADING, HANDLING FAC, INDOOR BALLISTIC  
RANGE, SUBSONIC-SUPERSONIC, TRANSONIC WIND TUNNELS, A COMPLETE CLINICAL  
RESEARCH FACILITY, ANIMAL BREEDING/HOLDING FACILITY.



INSTALLATION: ELECTRONIC PROVING GROUND

FT. HUACHUCA, AR.

CDR COL EARL D. DOWNING

TECH. DIR. DR. GEORGE E. SCHAFER

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RD&E	4.534	3.951
TOTAL PROCUREMENT	0.750	0.740
TOTAL O&M	1.069	0.988
TOTAL OTHER	5.110	5.068
TOTAL ANNUAL LAB	11.463	10.747
TOTAL INHOUSE	10.275	9.513
TOTAL INHOUSE RD&E	4.032	3.457
ANNUAL OPERATING COST	5.906	5.062

PERSONNEL	PERSONNEL DATA (END OF FY 1976)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	523	2	37	286
CIVILIAN	193	2	68	125
TOTAL	716	4	105	411

ACRES	SPACE AND PROPERTY			COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
42800	0.000	15.518	120.893	176.411	2.468	43.208

#### ...MISSION

PLAN, CDT, EVAL, REPT RESULTS OF DEV AND DEV-TYPE TESTS IAW INTGRD TESTING CYCLE POLY FOR COMM-ELCT AND OPT/ELECTRO-OPT EQUIP AND SYS, TEMPEST AND OTHER MAT. CP EMET, ECM VULNERABILITY TEST FAC, AND STF DEV/MAINT MASTER PLAN FOR DEV AND MODERNIZATION OF TEST INSTR, TEST FAC, TEST METHODOLOGY.

#### ...CURRENT IMPORTANT PROGRAMS

TRI-TAC PROGRAM  
ELECTROMAGNETIC COMPATIBILITY PROGRAM /EMC/  
TEMPEST PROGRAM  
REMOTELY MONITORED BATTLEFIELD SENSOR SYSTEM PROGRAM /REMBASS/  
COMSEC TESTING PROGRAM

#### ...FUNCTIONS/EQUIPMENT/CAPABILITIES

CONDUCT DEV AND DEV-TYPE TESTS IAW INTGRD TESTING CYCLE FOR COMM-ELCT AND OPTICAL/ELECTRO-OPT EQUIP AND SYSTEMS, TEMPEST, AND OTHER MATERIELS AS DIRECTED. MAINT CAPABILITY FOR ELECTRO-MAGNETIC COMPATIBILITY AND ELECTRONIC COUNTERMEASURES TEST ANALYSES. OPERATE AND MAINTAIN THE INSTRUMENTATION AND FACILITIES TO PROVIDE NECESSARY CAPABILITY. MAINTAIN CAPABILITY FOR CONDUCT OF TEMPEST TESTS AND ANALYSES DURING RESEARCH, DEVELOPMENT, TESTS AND EVALUATION CYCLES. CONDUCT OR PARTICIPAT IN FIELD RESEARCH AND RELATED STUDIES FOR DOD AGENCIES AS DIRECTED. DEVELOP AND MAINTAIN MASTER PLAN FOR THE DEVELOPMENT AND MODERNIZATION OF TEST INSTRUMENTATION, TEST FACILITIES, TEST METHODOLOGY AND TEST EXPERTISE NECESSARY TO SUPPORT ARMY MATERIEL DEVELOPMENT.

INSTALLATION: ELECTRONIC WARFARE LABORATORY

FT. MONMOUTH, N.J.

DIR MR CLYDE D. HARDIN

DEP DIR COL A.E. LA PORTE JR

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RDT&E	49.774	40.358
TOTAL PROCUREMENT	38.084	99.755
TOTAL G&M	0.986	1.312
TOTAL OTHER	0.000	0.000
TOTAL ANNUAL LAB	88.844	141.425
TOTAL INHOUSE	22.478	21.238
TOTAL INHOUSE RDT&E	18.140	17.181
ANNUAL OPERATING COST	2.334	2.376

PERSONNEL	PERSONNEL DATA (END OF FY 1976)				NON-PROF
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF		
MILITARY	60	0	3		57
CIVILIAN	434	9	235		199
TOTAL	494	9	238		256

ACRES	SPACE AND PROPERTY			COST (MILLION \$)		
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
0	142.936	13.617	48.502	205.055	0.000	47.800

#### ...MISSION

RES AND DEV ESSENTIAL TO ELECTRONIC WARFARE AND SELECTED AREAS OF INTEL. ENCOMPASSES APPLD R&D INCL QRC DEV AND SPT IN INTERCEPT, DF, SIG ANALYSIS, JAMMING, DECEP, SIG INT, LL, ACCUST INTELL, AGENT EQUIP, SECURITY, COUNTER-INTEL, VULNERABILITY AND COUNTER-COUNTERMEASURES.

#### ...CURRENT IMPORTANT PROGRAMS

EW/SIGINT, DEVELOPMENT/PRODUCTION OF ASA MISSION EQUIPMENT. SELF-PROTECTION, ARMY ACFT, TANKS, TROOPS, LAND COMBAT WARNING/ECM. VULNERABILITY/ECM, C-E SYSTEMS, MISSILES. TECHNOLOGY, EW TECH, HF THRU MM WAVES; IR THRU UV. QRC READINESS.

#### ...FUNCTIONS/EQUIPMENT/CAPABILITIES

TECHNICAL FACILITIES, BIG CROW(KC-135, AIRBORNE EW LABORATORY), IRCM SIMULATOR (US AND FOREIGN MISSILES), IR MEASUREMENTS AND DATA REDUCTION (ISMS, ISIS; AIRCRAFT SIGNATURES), MOBILE INSTRUMENTATION FACILITY (LGHCM), IMOSO PHOTO AND PHYSICAL SECURITY FACILITIES, EW INFORMATION SYSTEM (QRC DATA BASE), WAYSIDE TEST AREA (HF, VHF, DF, IONOSCND), ANTENNA RANGE FACILITY(MICROWAVE, DF, ANTENNA PATTERNS), SANDY HOOK TEST AREA(ELINT MEASUREMENTS), ANECHOIC CHAMBER (MICROWAVE ANTENNA MEASUREMENTS), ELECTRONICALLY SECURE LABORATORY AREA.

INSTALLATION: ELECTRONICS TECHNOLOGY AND DEVICES LAB

FT. MONMOUTH, N.J.

DIR DR C.G. THORNTON

DEP DIR MR S. DANKO

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RDT&E	21.202	21.791
TOTAL PROCUREMENT	1.571	0.482
TOTAL C&M	0.250	0.183
TOTAL OTHER	0.000	0.000
TOTAL ANNUAL LAB	23.023	22.456
TOTAL INHOUSE	12.645	12.128
TOTAL INHOUSE RDT&E	11.044	11.593
ANNUAL OPERATING COST	1.929	1.956

PERSONNEL	PERSONNEL DATA (END OF FY 1976)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	4	0	4	0
CIVILIAN	340	37	220	120
TOTAL	344	37	224	120

ACRES	SPACE AND PROPERTY SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
0	95.617	10.575	25.936	132.128	0.000	10.931

#### ...MISSION

TO DEVELOP AN ESSENTIAL BASE IN ELECTRONICS TECHNOLOGY AND DEVICES CONSISTENT WITH NEXT GENERATION ARMY SYSTEM OPERATIONAL REQUIREMENTS. TO THIS END, AN APPLIED R&D PROGRAM IS PURSUED FOCUSING ON CRITICAL BARRIER DEVICE AND MATERIAL PROBLEMS THAT INHIBIT DEVEL. OF NEW ARMY SYSTEMS.

#### ...CURRENT IMPORTANT PROGRAMS

ADVANCE IC TECHNOLOGY, FREQ. CONTROL, AND SIGNAL PROCESSING FOR 10-100X IMPROVEMENT IN SYSTEM COST, PERFORMANCE AND RELIABILITY. DEVELOP HIGH ENERGY PORTABLE POWER SOURCES FOR FIELD ARMY. DEVELOP COMPACT, LOW COST TUBES AND DISPLAYS FOR EXPANDED GROUND AND AIR SERVICES. SYNTHESIS AND CHARACTERIZATION OF IMPROVED ELECTRONIC MATERIALS FOR NEW DEVICES.

#### ...FUNCTIONS/EQUIPMENT/CAPABILITIES

FACILITIES AVAILABLE FOR PERFORMING R&D ON PREPARATION, PROPERTIES AND CONTROL OF ELECTRONIC MATERIALS FOR CONDUCTING R&D ON ELECTRONIC PARTS, DEVICES, INTEGRATED CIRCUITS AND ASSEMBLIES. LABORATORIES FOR PERFORMING R&D IN THESE AREAS ARE EQUIPPED WITH THE NORMAL ARRAY OF STD. LABORATORY INSTRUMENTATION AND FACILITIES. LABORATORY WORK AREAS INCLUDE FACILITIES FOR THE COMPLETE DESIGN, FABRICATION AND TESTING OF IC'S, HYBRID CIRCUITS, ASSEMBLIES, SEMICONDUCTOR DEVICES, QUARTZ CRYSTALS, MICROWAVE AND MILLIMETERWAVE DEVICES AND CIRCUITS, ELECTRON TUBES, AND DISPLAY DEVICES. ALSO FACILITIES FOR PRIMARY, SECONDARY, AND SPECIAL PURPOSE POWER SOURCES, ELECTROCHEMICAL RESEARCH, CHARACTERIZATION OF ELECTRONIC MATERIALS, AND FOR STUDIES OF RADIATION PROCESSING OF ELECTRONIC MATERIALS.

INSTALLATION: ENGINEER TOPOGRAPHIC LABORATORIES

FT. BELVOIR, VA.

CDR COL M.K. KURTZ, JR

TECH. DIR. MR. ROBERT P. MACCHIA

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RDT&E	15.375	14.576
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.070	1.465
TOTAL OTHER	0.216	0.231
TOTAL ANNUAL LAB	15.663	16.272
TOTAL INHOUSE	7.143	8.493
TOTAL INHOUSE RDT&E	6.855	7.339
ANNUAL OPERATING COST	1.808	2.150

PERSONNEL	PERSONNEL DATA (END OF FY 1976)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	16	1	11	5
CIVILIAN	261	20	164	97
TOTAL	277	21	175	102

ACRES	SPACE AND PROPERTY			COST (MILLION \$)		
	SPACE (THOUSANDS OF SQUARE FEET)	LAB	ADMIN	OTHER	TOTAL REAL PROP	EQUIP
33	90.722	7.000	19.280	117.002	6.000	11.000

#### ...MISSION

ACCOMPLISHES RESEARCH AND DEVELOPMENT OF SYSTEMS, EQUIPMENT, PROCEDURES AND TECHNIQUES APPLICABLE TO MAPPING, SURVEYING, GEODESY, PHOTO-INTERPRETATION AND MILITARY GEOGRAPHIC INFORMATION RELEVANT TO MILITARY OPERATIONS AND MATERIEL DEVELOPMENT.

#### ...CURRENT IMPORTANT PROGRAMS

SUPPORT TO PERSHING II  
TOPOGRAPHIC SUPPORT SYSTEM  
POSITION AND AZIMUTH DETERMINING SYSTEM  
ARMY TERRAIN INFORMATION SYSTEM  
DIGITAL IMAGE ANALYSIS LABORATORY

#### ...FUNCTIONS/EQUIPMENT/CAPABILITIES

FACILITIES INCLUDE A CARTOGRAPHIC LABORATORY TO STUDY THE PROBLEMS ASSOCIATED WITH HANDLING DIGITAL CARTOGRAPHIC DATA, A DIGITAL IMAGE PROCESSING LABORATORY TO STUDY THE MANIPULATION AND ENHANCEMENT OF TERRAIN IMAGERY FOR OBTAINING MAPPING AND GEOGRAPHIC DATA, AND A COHERENT OPTICS LABORATORY FOR DETERMINING THE POTENTIAL OF COHERENT OPTICS FOR TOPOGRAPHIC DATA PROCESSING. COMPUTATIONAL EQUIPMENT INCLUDES THE CDC 6400, GOODYEAR STARAN S-1000 AND DEC PDP 11/50. OTHER SPECIALIZED EQUIPMENT INCLUDE A COMTAL, DICOMED, PDS DIGITAL AUTOMATED MICRODENSITOMETER, A RECORDING OPTICAL SPECTRUM ANALYZER, POCKELS RANDOM OPTICAL MODULATOR, COLOR AND MULTIBAND AERIAL CAMERAS, PRECISION MENSURATION EQUIPMENT, AND A COHERENT RADAR SIGNAL PROCESSOR.

INSTALLATION: ENGINEER WATERWAYS EXPERIMENT STATION

VICKSBURG, MISS.

DIR COL JOHN L. CANNON

TECH DIR MR F.R. BROWN

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RDT&E	12.386	14.187
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.217	0.290
TOTAL OTHER	34.650	38.023
TOTAL ANNUAL LAB	47.253	52.500
TOTAL INHOUSE	37.224	41.650
TOTAL INHOUSE RDT&E	10.803	12.283
ANNUAL OPERATING COST	6.335	7.055

PERSONNEL	PERSONNEL DATA (END OF FY 1976)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	39	3	26	13
CIVILIAN	1350	80	463	887
TOTAL	1389	83	489	900

ACRES	SPACE AND PROPERTY			COST (MILLION \$)		
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
2092	1665.220	330.304	170.806	2166.330	17.211	29.096

#### ...MISSION

MIL&CIV FUNDED RSCH, DEV&INVS IN HYD, ECOLOGY, PERM&EXPEDIENT PAVEMENTS, SOIL, CONCRETE, EXPLO WPN EFF, EXPLO EXCAVATION, VEH MOBILITY&ENVIRONMENTAL ASPECTS OF MIL OPERATIONS. OPERATE TECH LIBRARY&GOVERNMENT CEMENT&POZZO-LAN TEST PROGRAM. SERVES CE, DARCOM, DNA, ERDA, AF, NAVY, EPA & OTHER AGENCIES

#### ...CURRENT IMPORTANT PROGRAMS

HYDEMATH MODELING TO SOLVE RIVER, TIDAL, WIND-WAVE, ECOLOGICAL&STRUC PROBS. RSCH ON VEH MOBILITY, REMOTE SENSING, DREDGED MAT, & EARTHQUAKE DESIGN CRIT. NUC&HE RSCH TO DEV CRIT FOR ED OF PROTECTIVE STRUC, BARRIERS&EXCAVATIONS. RSCH, DEV&FORMULATION OF NEW&IMP ENG CRIT ON ROADS, STOR AREAS, & AIRFIELDS. INVS OF CEMENTITIOUS MATERIALS AND RSCH OF MASS AND STRUCTURAL CONCRETE

#### ...FUNCTIONS/EQUIPMENT/CAPABILITIES

CAPABLE OF PERF GEN INVS IN FLD OF HYD, SOIL MECH, CONCRETE, MOBILITY OF MIL VEH, EXPLO EFF, ECOLOGY&EXPLO EXCAVATION AND DEV OF STRUC & PAVEMENTS DESIGN CRIT. THRU BR&APPLIED RSCH, THE CAPABILITY OF DEV METHODS&TECH AND THE TESTING OF MAT&EQUIP IS EXERCISED TO ASST IN ACCOMPMT OF THE CE MSN. WES RESERVATION CNTN BLDGS, TEST SITES, SPECIAL EQUIP&OTHER PLANT FAC. TEST SITES&FAC FOR SP PURPOSES ARE MAINT IN OTHER AREAS ON PERM OR TEMP BASIS. FAC INCL FLUMES OF DIFF TYPES&SIZES, WAVE&TIDE GENR MACH, DRILL EQUIP, FULLY EQUIPED SOILS, CONCRETE, CHEMISTRY, CALBR, ELCT&TEMPERATURE CON ENVIRONMENTAL MODEL LABS, X-RAY DIFFRACTION&SPECTROSCOPY APPAR, LARGE AND SMALL BLAST LOAD GENERATOR, 200K DYNAMIC LOADER, MOBILITY RSCH FAC, SINGLE AND MULTIPLE WHEEL LOAD CARTS, SUR EFF BLAST FAC, HIGH&LOW FREQ VIBRATORS, ELECTRON MICROSCOPE, LARGE SCALE CMPT FAC AND TECH LIBRARY.

INSTALLATION: FIELD ARTILLERY BOARD

FT. SILL, OK.

PRES COL BORIS POGLOFF

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RDT&E	0.771	1.073
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.051	0.047
TOTAL OTHER	1.931	2.123
TOTAL ANNUAL LAB	2.753	3.243
TOTAL INHOUSE	2.753	3.243
TOTAL INHOUSE RDT&E	0.771	1.073
ANNUAL OPERATING COST	0.249	0.249

PERSONNEL	PERSONNEL DATA (END OF FY 1976)				NON- PROF
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF		
MILITARY	211	0	42		169
CIVILIAN	35	0	4		31
TOTAL	246	0	46		200

ACRES	SPACE AND PROPERTY SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
23	28.100	32.802	17.640	78.542	3.330	1.260

...MISSION

PLAN CONDUCT AND REPORT ON DT I DT II DT III AND OTHER USER-TYPE TESTS  
 PARTICIPATE IN DT I DT II AND DT III AS DIRECTED  
 PROVIDE ADVICE TO PROPONENT AGENCIES AND DEVELOPERS  
 CONDUCT OTHER TESTS AND EVALUATIONS AS DIRECTED BY TRADOC

...CURRENT IMPORTANT PROGRAMS

FDTE TACFIRE  
 OPERATIONAL TEST III XM692  
 OPERATIONAL TEST III XM483  
 OPERATIONAL TEST II OBSERVED FIRE TRAINER  
 OPERATIONAL TEST II POSITION AZIMUTH DETERMINING SYSTEM

...FUNCTIONS/EQUIPMENT/CAPABILITIES

ONE MET STATION  
 TEST ITEMS ADDITIONAL SUPPORT IS OBTAINED FROM USAFACS WHEN NEEDED

INSTALLATION: FRANKFORD ARSENAL LABORATORIES

PHILADELPHIA, PA.

CDR LTC FRANK W. HACKLEY

TECH DIR DR SIDNEY ROSS

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RDT&E	23.535	17.245
TOTAL PROCUREMENT	113.600	61.700
TOTAL O&M	21.600	7.100
TOTAL OTHER	35.900	0.000
TOTAL ANNUAL LAB	194.635	86.045
TOTAL INHOUSE	73.536	50.945
TOTAL INHOUSE RDT&E	17.036	9.245
ANNUAL OPERATING COST	20.221	16.759

PERSONNEL	PERSONNEL DATA (END OF FY 1975)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	10	0	10	0
CIVILIAN	1079	33	559	520
TOTAL	1089	33	569	520

ACRES	SPACE AND PROPERTY (THOUSANDS OF SQUARE FEET)			COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
43	577.421	149.872	425.050	1152.343	16.960	12.549

#### ...MISSION

COMMODITY CNTR/SMALL CAL AMMO, FIRE CONTROL SYS, CANNON CAL MUN, DEV & ENG & QA/CASES, ARTIL METAL PARTS, MECH TIME FUZES & TIME FUZES & TIMERS, RES & TECH/OPTICAL MAT, NON-FERR METAL, MATRL DEGRAD, CORROSION PREV, MAT ENGR, SYNTH LUBS & FLUIDS, LASER COUNTERMEASURE, TMDE, TRACERS.

#### ...CURRENT IMPORTANT PROGRAMS

ARMY SMALL AND AUTOM CANNON CAL AMMO RES, DEV, AND ENG PROGRAM  
SMALL CALIBER AMMUNITION MODERNIZATION PROGRAM, SCAMP  
FIRE CONTROL EQ FOR AIRCRAFT, AIR DEF, ARTIL, COMB VEH, AND SMALL CAL WEAPS  
TEST MEASUREMENT DIAGNOSTIC EQUIPMENT, TMDE PROGRAM  
RESEARCH AND DEVELOP FOR LASER COUNTERMEASURE AND PROTECTION

#### ...FUNCTIONS/EQUIPMENT/CAPABILITIES

36 BALLIST TEST RANGES, BALLIST MEAS EQUIP, PHOTOMETRIC TRACER, MICROWAVE INTERFEROMETER, HIGH SPEED HARD & SOFT X-RAY, DOPPLER RADAR, ANECHOIC CHAMB, HOLOGRAPHIC EQ, VERT TEST TOWERS, 4 PADS FOR POINT FUZE DETON, 18 IN HI-G SHOCK MACHINE, 155MM AIR GUN, SPEC IGN & COMBUST EQ, RAPID SCAN SPECTROPHOTOMETER, ELECT MICROSCOPE, SPECTROMETER, OPTICAL LAB & DESIGN SHOP, LASER TEST FAC, SOLID STATE PHY LAB, ELECT BEAM VAC FILM DEPOSIT EQUIP, PHOTOELASTIC STRESS ANAL EQUIP, ATMOSP SIMULATOR, CDC BATCH TERMINALS, HYDRAULIC & MECH POWDER MOLD EQUIP, MICROBIOLOGY LAB, TROP CLIMATE ROOM, DIFF SCAN CALORIMET, PROP PROC LAB, AIRBORNE FIRE CONTROL EQUIP, AUTOMAT CHECK-OUT EQUIP, HUMIDITY & OZONE ROOM, SCAMP MODULES, PILOT TRACER LOAD FAC, RADIO-ISOTOPE LAB, ULTRASONIC MAT TEST SYS, FLEC MICROSCOPE, VAC-ARC MELTING FURN, STAT-DYNAM IMPACT TEST, MAIN ENH VEHICLE TEST FAC, LASER PHOTOLYSIS, SPACE SIMULATOR.

INSTALLATION: HARRY DIAMOND LABORATORIES

WASHINGTON, D.C.

CDR COL THOMAS MCGREGOR

TECH. DIR. DR. W.W. CARTER

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RD&E	65.282	61.845
TOTAL PROCUREMENT	49.697	38.632
TOTAL O&M	26.990	24.110
TOTAL OTHER	0.970	0.417
TOTAL ANNUAL LAB	142.939	125.004
TOTAL INHOUSE	40.452	35.626
TOTAL INHOUSE RD&E	30.033	30.922
ANNUAL OPERATING COST	10.443	12.191

PERSONNEL	PERSONNEL DATA (END OF FY 1976)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	10	3	10	0
CIVILIAN	1399	72	510	889
TOTAL	1409	75	520	889

ACRES	SPACE AND PROPERTY			COST (MILLION \$)		
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
2830	277.944	177.399	397.789	853.132	33.854	28.991

#### ...MISSION

RD&E ON PROXIMITY & ELECTRONIC FUZING/ECM-ECCM CTR/ARM-CM/PATRIOT F...  
TEMPS/M734/POWER SUPPLIES/NUC WPNS EFFECTS/TREE/INTERNAL & EXTERNAL...  
SPEC PURPOSE RADARS/FLUIDICS/M1140 LANCE FUZE/XM732 SHORT INTRUSION FUZE

#### ...CURRENT IMPORTANT PROGRAMS

INFLUENCE TIME AND COMMAND FUZING/TARGET DETECTION AND SIGNATURE ANAL-  
YSIS/TARGET INTERCEPT PHAS- OF TERM GUID/WEAPON SYS SYNTHESIS&ANALYSIS/  
ECCM&NUC EFFECTS & OTHER SEVERE ENV/FLUIDICS & MED ENG/INSTRUMENTATION&  
SIMULATION/COMPONENTS&MATERIALS/INDUSTRIAL & MAINTENANCE ENGINEERING

#### ...FUNCTIONS/EQUIPMENT/CAPABILITIES

SIMULATORS TO DETERMINE SUSCEPTIBILITY OF WPN SYS TO NUCLEAR WPNS EFFECT  
& TO HARDEN DESIGNS/PULSED NUCLEAR REACTOR & HIGH INTENSITY X-RAY/EY-  
TREMELY LARGE DOSE & VOLUME GAMMA RAY GEN AURORA & BICONIC EMP DEVICE &  
ENVIRONMENT SIMULATION/ARTILLERY SIMULATOR TO EVALUATE EFFECTS OF FIRING  
RANGE/RADAR TEST SITE/HIGH PRESS SHOCK TUBES MERCURY ARC PLASMA TUBE &  
OPTICAL & SPECTROSCOPIC EQUIPMENT/ECM VULNERABILITY ANALYSES/CTRMEASURE  
EQUIPMENT DEVELOPMENT/TECHNICAL INTELLIGENCE STUDIES/MICROCIRCUIT  
FABRICATION/HIGH-S ELECTRONICS  
LATITUDE MAGNETIC SIMULATOR FOR ANTITANK SIGNATURE ANALYSIS/ANTENNA TEST  
LARGE TRANSPORTABLE EMP SIMULATOR T MPS FOR HIGH ALT & THREAT LEVELS



INSTALLATION: HUMAN ENGINEERING LABORATORY

ABERDEEN PROV GR, MD.

DIR. DR. JOHN D. WEISZ

EXEC. LTC RICHARD D. KAVANAUGH

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RDT&E	7.198	6.361
TOTAL PROCUREMENT	0.060	0.000
TOTAL C&M	0.177	0.260
TOTAL OTHER	0.437	0.387
TOTAL ANNUAL LAF	7.872	7.008
TOTAL INHOUSE	5.722	5.545
TOTAL INHOUSE RDT&E	5.071	4.898
ANNUAL OPERATING COST	0.732	0.892

PERSONNEL	PERSONNEL DATA (END OF FY 1976)			
	AUTHORIZED STRENGTH	TOTAL PHCS	TOTAL PROF	NON- PROF
MILITARY	30	1	11	19
CIVILIAN	141	18	89	52
TOTAL	171	19	100	71

ACRES	SPACE AND PROPERTY			COST (MILLION \$)		
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
10	30.776	19.352	29.538	79.666	0.761	3.250

### ...MISSION

CONDUCTS FUNDAMENTAL AND APPLIED RESEARCH IN HUMAN FACTORS ENGINEERING  
 PROVIDES DIRECT DESIGN SUPPORT TO ALL MATERIEL DEVELOPMENT PROGRAMS SPON-  
 -SORED BY DARCOM HEL DETACHMENTS EST AT PA,FA,RIA,EA,AMSAA,TACOM,MICOM  
 SERVES AS LEAD LAB ARMY FOR TECHNOLOGY-HUMAN FACTORS ENGINEERING

### ...CURRENT IMPORTANT PROGRAMS

HUMAN ENGINEERING LAB ARMOR SYSTEMS TESTS  
 MILITARY OPERATIONS IN BUILT-UP AREAS  
 HUMAN ENGINEERING LAB ARTILLERY TESTS  
 HUMAN FACTORS ENG IN SPT OF ALL MATERIEL BEING DEV BY DARCOM  
 HEARING PERFORMANCE REQUIREMENTS ARMY PERSONNEL

### ...FUNCTIONS/EQUIPMENT/CAPABILITIES

DATA ACQUISITION AND TELEMETRY SYSTEM  
 GAT 24 HELICOPTER SIMULATOR  
 COMMAND CONTROL SIMULATOR SYS AND TEST FACILITY  
 ACUSTICAL RSCH ANECHOIC CHAMBER REVERBERANT ROOM  
 LONG RANGE POSITIONED DETERMINING SYS  
 INSTRUMENTED PHYSICAL ENCOURANCE OCCUPSE  
 EYE MOVEMENT MEASURING DEVICE  
 SMALL ARMS TEST FIRING RANGE  
 NOISE MEASUREMENT AND ANALYSIS INSTRUMENTATION  
 WOOD AND METAL WORKING TEST SUPPORT CAPABILITY  
 HUMAN PERFORMANCE DATA BANK  
 ARMOR TEST SITE

INSTALLATION: INFANTRY BCARD

FT. BENNING, GA.

PRES. COL WALTER E. MEINZEN

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RDT&E	1.207	1.617
TOTAL PROCUREMENT	0.100	0.218
TOTAL C&M	0.098	0.019
TOTAL OTHER	1.739	1.575
TOTAL ANNUAL LAB	3.144	3.429
TOTAL INHOUSE	3.144	3.429
TOTAL INHOUSE RDT&E	1.207	1.617
ANNUAL OPERATING COST	1.090	1.167

PERSONNEL	PERSONNEL DATA (END OF FY 1976)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	109	0	7	102
CIVILIAN	56	0	4	52
TOTAL	165	0	11	154

ACRES	SPACE AND PROPERTY			COST (MILLION \$)		
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
10	0.000	39.237	66.133	105.370	0.900	0.357

#### ...MISSION

PLAN CONDUCT REPORT ON OPERATIONAL TEST 1/2/3 FORCE DEVELOPMENT TESTS & OTHER USER TESTS. PARTICIPATE IN DEVELOPMENTAL TEST 1/2/3. PROVIDE ADVICE TO PROPONENT AGENCIES & MATERIEL DEVELOPERS ON EQUIP USED BY OR PROVIDED SPT TO INFANTRYMEN. DATA&INFO DERIVED DIRECT FR TEST EXPERIENCE IS BASIS.

#### ...CURRENT IMPORTANT PROGRAMS

PERSONNEL ARMOR SYSTEM FOR GROUND TROOPS  
WEAPONEER/LASERTRAIN  
COLLECTIVE COLLECTION FOR COMMAND CONTROL & COMMUNICATION ACTIVITIES  
DRAGON LAUNCH SIMULATOR  
DRAGON AN/TAS-5 NIGHT TRACKER

#### ...FUNCTIONS/EQUIPMENT/CAPABILITIES

EQUIPMENT & ANCILLARY ITEMS TO BE USED BY INF UNITS FOR COMMAND & CONTROL  
FIRE POWER TARGET ACQUISITION GROUND SURVEILLANCE FIRE CONTROL GROUND  
MOBILITY & TRAINING. CLOTHING & EQUIP FOR INDIVIDUALS. RATIONS COOKING &  
MESSING EQUIP. ANTIPERSONNEL MINES & RELATED EQUIP. CLOTHING EQUIP  
RATIONS WORN OR CARRIED BY INDIVIDUAL PARACHUTISTS WHILE JUMPING FROM  
AIRCRAFT & CARRIED BY INDIVIDUAL AFTER CLEARING DROP ZONE. CHEMICAL  
WARFARE-BIOLOGICAL WARFARE EQUIP FOR INDIVIDUALS.

INSTALLATION: INSTITUTE OF DENTAL RESEARCH

WASHINGTON, D.C.

CDR COL DUANE E. CUTRIGHT

TECH DIR DR. GINO BATTISTONE

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL ROT&E	0.827	0.900
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.080	0.115
TOTAL OTHER	1.033	1.121
TOTAL ANNUAL LAB	1.940	2.136
TOTAL INHOUSE	1.940	2.136
TOTAL INHOUSE ROT&E	0.827	0.900
ANNUAL OPERATING COST	0.139	0.139

PERSONNEL	PERSONNEL DATA (END OF FY 1976)				NON-PROF
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF		
MILITARY	62	23	45		17
CIVILIAN	26	2	7		19
TOTAL	88	25	52		36

ACRES	SPACE AND PROPERTY (THOUSANDS OF SQUARE FEET)			COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
4	9.325	5.696	6.730	21.751	0.853	1.118

#### ...MISSION

TO CONDUCT RSCH IN THE ETIOLOGY, PREVENTION AND CONTROL OF ORAL DISEASES AND SIMPLIFIED TECHNIQUES FOR RAPID AND EFFECTIVE DENTAL TREATMENT.

#### ...CURRENT IMPORTANT PROGRAMS

HYDROSCRUB: PRESURGICAL ARM AND HAND SCRUBBER DEVELOPMENT AND TESTING OF BIODEGRADABLE LACTIC ACID DERIVED COPOLYMERS. RAPID METHOD OF COLD STERILIZATION. NEW METHOD FOR INCREASING PORCELAIN TO BASE METAL STRENGTH LASER REPAIR AND FABRICATION OF ORAL PROSTHESIS AND FRACTURAL FIXATION.

#### ...FUNCTIONS/EQUIPMENT/CAPABILITIES

DETERMINE PHYSICAL, CHEMICAL, AND MECHANICAL PROPERTIES OF METALS, ALLOYS, CERAMICS, PLASTICS, AND POLYMERS, TO INCLUDE STRESS TESTING AND ELECTRON MICROSCOPIC EVALUATION. CONDUCT EXPERIMENTAL RSCH IN MICROBIOLOGY, BIOCHEMISTRY, IMMUNOLOGY, RADIATION MEDICINE, AND PHARMACOLOGY. TEST AND EVAL FACETS OF CLINICAL DENTISTRY, TO INCLUDE CLINICAL AND LABORATORY TECHNIQUES. PREPARE AND ANALYSE HISTOPATHOLOGIC SPECIMENS AND PERFORM DIFFERENTIAL DIAGNOSTIC EVALUATION ON THEM. PERFORM MOST FACETS OF ANIMAL SURGERY REQUIRED TO SUPPORT RESEARCH EFFORT.

INSTALLATION: INSTITUTE OF SURGICAL RESEARCH

FT. SAM HOUSTON, TX.

COR COL BASIL A. PRUITT JR

TECH DIR DR ARTHUR D. MASON JR

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RDT&E	1.635	1.750
TOTAL PROCUREMENT	0.000	0.000
TOTAL C&M	0.000	0.000
TOTAL OTHER	1.918	1.971
TOTAL ANNUAL LAB	3.553	3.721
TOTAL INHOUSE	3.553	3.721
TOTAL INHOUSE RDT&E	1.635	1.750
ANNUAL OPERATING CCST	0.180	0.200

PERSONNEL	PERSONNEL DATA (END OF FY 1976)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	136	19	21	115
CIVILIAN	78	3	7	71
TOTAL	214	22	28	186

ACRES	SPACE AND PROPERTY			COST (MILLION \$)		
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
1	26.424	1.800	22.408	50.632	2.013	1.681

### ...MISSION

TO PERFORM STUDIES ON THE PATHOGENESIS, DIAGNOSIS, PROPHYLAXIS, TREATMENT, AND EPIDEMIOLOGY OF NATURALLY OCCURRING INFECTIOUS DISEASES OF MIL IMPORTANCE AGAINST BIOLOGICAL AGENTS AND ON THOSE MICRO-ORGANISMS WHICH REQUIRE SPECIAL CONTAINMENT FACILITIES.

### ...CURRENT IMPORTANT PROGRAMS

BURN INFECTION, TREATMENT AND PREVENTION  
STUDY OF POST BURN HYPERMETABOLISM AND ENDOCRINOLOGY  
CIRCULATORY DYNAMICS OF BURN INJURY AND RESUSCITATION  
LEUKOCYTE DEFENSE MECHANISMS AFTER BURN INJURY  
PATHOPHYSIOLOGY OF PULMONARY INJURY ASSOCIATED WITH BURNS

### ...FUNCTIONS/EQUIPMENT/CAPABILITIES

OPERATES 60 BEDS FOR SERIOUSLY BURNED AND INJURED PATIENTS. PROVIDES CLINICAL LABORATORY SUPPORT AND RSCH CAPABILITY IN THE FIELDS OF PATHOLOGY, INCLUDING USE OF ELECTRON MICROSCOPE, MICROBIOLOGY, EXPERIMENTAL SURGERY, PHYSIOLOGY AND BIOCHEMISTRY. MAINTAINS AN ANIMAL COLONY, ELECTRONIC SHOP, MACHINE SHOP, SURGICAL LIBRARY, METABOLIC CHAMBER, AND COMPUTER FACILITY.

INSTALLATION: KWAJALEIN MISSILE RANGE, MARSHALL ISLANDS

APO SAN FRANCISCO

DIR COL G.D. Sisson

DEP DIR MR O.E. OVA

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RDT&E	89.271	92.678
TOTAL PROCUREMENT	0.000	0.000
TOTAL U&M	0.000	0.000
TOTAL OTHER	0.695	0.750
TOTAL ANNUAL LAB	89.966	93.428
TOTAL INHOUSE	4.657	4.695
TOTAL INHOUSE RDT&E	3.962	3.945
ANNUAL OPERATING COST	3.250	3.300

PERSONNEL	PERSONNEL DATA (END OF FY 1976)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	29	0	12	17
CIVILIAN	115	0	43	72
TOTAL	144	0	55	89

ACRES	SPACE AND PROPERTY			TOTAL	COST (MILLION \$)	
	SPACE (THOUSANDS OF SQUARE FEET)	LAB	ADMIN		OTHER	REAL PROP
1491	0.000	210.232	2625.077	2835.309	233.788	133.239

#### ...MISSION

MANAGE, DIRECT, CONTROL AND COORDINATE OVERALL ACTIVITIES OF THE KWAJALEIN MISSILE RANGE IN ACCORDANCE WITH DOD NATIONAL RANGE POLICIES. SERVE AS THE PRINCIPAL ADVISOR FOR ALL MATTERS PERTAINING TO THE KMR RELATIONSHIP WITH THE TRUST TERRITORY OF THE PACIFIC ISLANDS.

#### ...CURRENT IMPORTANT PROGRAMS

BALLISTIC MISSILE DEFENSE R&D TESTING  
ADVANCED BALLISTIC REENTRY SYSTEMS-USAF SAMSD-R&D TESTING  
MINUTEMAN III-USAF SAMSD R&D TESTING  
MINUTEMAN II AND MINUTEMAN III-USAF SAC-OPERATIONAL TESTING  
TRIDENT OPERATIONAL TESTING

#### ...FUNCTIONS/EQUIPMENT/CAPABILITIES

ALCOR, ALTAIR, TRADEX, 2-AN/MPS-36 AND AN/TPQ-18 RADARS, 8 CINETHODOLITES, 8 BALLISTIC CAMERAS, 4 SPECTRAL CAMERAS & FIXED CAMERAS, PHOTO LABORATORY, S-BAND TELEMETRY COMPLEX INCLUDING 8 AUTOTRACKING ANTENNAS, RECEIVE AND RECORD SYSTEM, DATA SEPARATION & DISPLAY SYSTEM, DATA DISTRIBUTION SYSTEM WITH CAPABILITY FOR RECEIVING RECORDING AND PROCESSING PCM/FM, PCM/FM/FM, PDM/FM/FM, PDM/FM, PAM/FM/PM, SPLASH DETECTION RADARS WITH IMPACT TIMING SYSTEM, RV RECOVERY SYSTEM, LONG-HAUL & INTRA-ATOLL COMMO SYSTEM, METEOROLOGICAL SYSTEM, FREQUENCY CONTROL & ANALYSIS SYSTEM, CALIBRATION LABORATORY, TIMING & COUNTDOWN SYSTEM, LAUNCH/ORDNANCE CAPABILITY, COMMAN & CONTROL CENTER, 7600/6400 CENTRAL DATA PROCESSING CENTER, POSITION NAVIGATION SYSTEM, CLOSED CIRCUIT TELEVISION SYSTEMS, DATA REDUCTION AND ACCURACY ANALYSIS FACILITY.

INSTALLATION: LETTERMAN ARMY INSTITUTE OF RESEARCH

PRESIDIO, S.F., CAL.

CDR COL JOHN E. CANHAM

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RDT&E	6.227	6.260
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	2.870	3.678
TOTAL ANNUAL LAB	9.097	9.938
TOTAL INHOUSE	9.097	9.938
TOTAL INHOUSE RDT&E	6.227	6.260
ANNUAL OPERATING COST	2.615	2.400

PERSONNEL	PERSONNEL DATA (END OF FY 1976)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	260	20	102	158
CIVILIAN	201	18	61	140
TOTAL	461	38	163	298

ACRES	SPACE AND PROPERTY			COST (MILLION \$)		
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
5	119.520	116.792	103.584	339.896	42.449	9.048

### ...MISSION

TO PROVIDE GEN MED RSCH CAPABILITY AND CONDUCT RSCH IN AREAS OF NUTRITION, EFF OF LASERS, EXPER PSYCHOLOGY. SUPPORTS CLINICAL INVESTIGATION PROJECTS RECOMMENDED BY CMDR, LETTERMAN ARMY MED CENTER AND OTHER RSCH ACTIVITIES AS DIR BY CMDR US ARMY MED RSCH AND DEVELOPMENT COMMAND.

### ...CURRENT IMPORTANT PROGRAMS

RESUSCITATION SOLUTIONS FOR THE ACUTELY INJURED. APPLIED NUTRITION STUDIES OF DOD PERSONNEL. ADVERSE EFFECTS ON HUMAN SKIN BY ENVIRONMENTAL FACTORS AND INFECTIOUS AGENTS. DETERMINATION OF SAFE THRESHOLD LEVELS OF COHERENT RADIATION. METABOLIC ADAPTION AND METABOLIC INTERRELATIONSHIP.

### ...FUNCTIONS/EQUIPMENT/CAPABILITIES

MAJOR EQUIP AND FACILITIES INCLUDE HUMAN METABOLIC WARD, SURGICAL OPERATING ROOMS, ENVIRONMENTAL ROOMS, GERM-FREE ANIMALS, SCANNING AND TRANSMISSION MICROSCOPES, AUTO ANALYSERS AND RECORDERS, INCLUDING AUTO BETA AND GAMMA COUNTERS, SHADOW SHIELD WHOLE BODY COUNTER, GAMMA CAMERA, AUTO AMINO ACID ANALYZERS, AND MASS SPECTROMETER. RSCH INCLUDE: NUTR SURVEYS AND RATION TESTING, BIOMED CMPT RSCH, BASIC AND APPLIED STUDIES OF TRACE MINERAL METABOLISM, EXER AND FATIGUE IN MAN AND MILITARY DOG. STUDIES OF DELAYED HYPERSENSITIVITY, FRICTION BLISTERS, STUDIES ON BLOOD PRESERVATION, OPTIONAL STORAGE CONDITIONS AND CELL FREE RESUSCITATION, FUNGAL SKIN DIS., PROLONGED WATER IMMERSION, AND PRICKLY HEAT. MAINTAINS BREEDING COLONIES-SPECIAL ANIMAL STRAINS.

INSTALLATION: MATERIAL SYSTEMS ANALYSIS AGENCY

ABERDEEN PROV GR.MD

DIR. DR. JOSEPH SPERRAZZA

C.O. AND DEP. DIR. COL R.D. POWELL

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RDT&E	17.406	17.900
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	2.103	1.793
TOTAL OTHER	0.000	0.000
TOTAL ANNUAL LAB	19.509	19.693
TOTAL INHOUSE	13.180	13.318
TOTAL INHOUSE RDT&E	11.678	12.200
ANNUAL OPERATING COST	1.322	1.505

PERSONNEL	PERSONNEL DATA (END OF FY 1976)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	29	0	21	8
CIVILIAN	418	15	316	102
TOTAL	447	15	337	110

ACRES	SPACE AND PROPERTY			COST (MILLION \$)		
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PRGP	EQUIP
	LAB	ADMIN	OTHER			
3	13.083	91.994	1.715	106.792	2.308	0.360

#### ...MISSION

TO PROVIDE THE CENTRAL INDEPENDENT TECHNICAL CAPABILITY IN DARCCM FOR THE CONDUCT OF MAJOR SYSTEMS ANALYSIS AND COST EFFECTIVENESS STUDIES. TO DESIGN DEVELOPMENT TESTS AND CONDUCT INDEPENDENT EVALUATIONS OF MAJOR MATERIEL SYSTEMS. LEAD ACTIVITY FOR SURVIVABILITY. ADMINISTER JTCG/ME.

#### ...CURRENT IMPORTANT PROGRAMS

AAH  
AN/TSQ  
XM 1  
MICV S  
UTTAS

#### ...FUNCTIONS/EQUIPMENT/CAPABILITIES

CONDUCT AMC WPN SYS ANALYSIS AND EVAL OF MATERIAL CONCEPTS AND PROPOSALS DEVELOPS, IMPROVES, AND DISSEMINATES METHODOLOGY AND TECHNIQUES FOR CONDUCT OF SYS ANALYSIS, ANAL OF PERFORMANCE, SCHEDULE AND COST RISKS, DESIGN, CONDUCT AND EVAL OF TESTS. EVAL LIFE CYCLE REQ OF MATERIAL SYS. CONDUCTS TACTICAL, OPERATIONAL ANALYSIS OF WPN AND MATERIAL SYSTEMS. RELIABILITY, AVAILABILITY AND MAINTAINABILITY CENTER FOR ARMY SYS. TECH DIR OF AMC SURVEILLANCE PROGRAM FOR STOCKS OF ARMY MISSILES, NUCLEAR, AND NONNUCLEAR AMMUNITION. PROVIDE TECH COORD, DATA, AND ANALYSIS FOR DETERMINATION OF JOINT SERVICES MUNITIONS EFFECTIVENESS MODELS AND MANUALS.

INSTALLATION: MATERIALS AND MECHANICS RESEARCH CENTER

WATERTOWN, MASS.

DIR DR E.S. WRIGHT

DEP DIR LTC E.E. CHICK

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RDT&E	22.486	22.161
TOTAL PROCUREMENT	7.454	7.143
TOTAL O&M	2.369	2.493
TOTAL OTHER	0.000	0.000
TOTAL ANNUAL LAB	32.309	31.797
TOTAL INHOUSE	19.402	17.337
TOTAL INHOUSE RDT&E	13.801	11.951
ANNUAL OPERATING COST	4.523	4.451

PERSONNEL	PERSONNEL DATA (END OF FY 1976)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	16	2	7	9
CIVILIAN	641	64	204	437
TOTAL	657	66	211	446

ACRES	SPACE AND PROPERTY SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
48	389.161	96.018	169.979	655.158	15.726	15.962

#### ...MISSION

MANAGE DARCOM R&D STRUCTURAL MATERIALS & MECH PROGRAM AS LEAD LAB FOR MATERIALS, SOLID MECH & TESTING TECHNOLOGY. CONDUCT TECHNOLOGICAL PROGRAMS IN MAT & MECH USED IN ARMY MATERIEL. EXECUTES PROGRAM IN OWN FACILITIES & BY ASSIGNMENT & FUND TRANSFER TO OTHER DARCOM LABORATORIES & CONTRACTORS

#### ...CURRENT IMPORTANT PROGRAMS

BASIC RESEARCH IN MATERIALS AND MECHANICS  
ADVANCED MATERIALS FOR AIRCRAFT  
ADVANCED MATERIALS FOR ARMOR  
ADVANCED MATERIALS FOR ARMAMENT  
ADVANCED MATERIALS FOR LASER HARDENING

#### ...FUNCTIONS/EQUIPMENT/CAPABILITIES

MANAGE DARCOM R&D PROG IN MATERIALS & MECH & CONDUCT TECH PROGS IN MATERIALS SYSTEMS & MECHANICS DIRECTED TO ARMY MATERIEL. MANAGE DSD PROG AS EXECUTIVE AGENT-ARMOR TECHNOLOGY. MANAGE & CONDUCT INTEGRATED & DIRECTED BASIC & APPLIED RES ON MATERIALS SUCH AS METALS, CERAMICS, ORGANIC & INORGANIC POLYMERS & COMPOSITES. MANAGE & CONDUCT THEORETICAL & APPLIED STUDIES ON MECH OF MATLS & SYSTEMS. IDENTIFY & INVE BASIC FACTORS INVOLVED IN PROC & APPL OF NEW & IMPROVED MATLS. TECH MANAGE FOUR INFO ANAL CEN. ASST IN DESIGN & DEV OF PROTOTYPES. DEV METHODS FOR TEST & EVAL OF MATS & STRUCTURES. MANAGE ARMY PORTION DEFENSE STANDARDIZATION PROG. CONDUCT ENGINEERING STANDARDIZATION EFFORT. MANAGE DARCOM MATERIALS TESTING PROGRAM. CONDUCT PEMA MANUFACTURING METHODS & TECHNOLOGY PROGRAMS & ADVISE COMMAND & INDUSTRY ON PROCESSING TECHNIQUES.



INSTALLATION: MATERIEL TESTING DIRECTORATE

ABERDEEN PROV GR, MD.

CDR COL ALVIN D. UNGERLEIDER

ASSOC. DIR. MR B.D. SISSON

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RDT&E	25.548	25.072
TOTAL PROCUREMENT	6.760	6.635
TOTAL C&M	0.947	0.930
TOTAL OTHER	2.226	2.783
TOTAL ANNUAL LAR	35.481	35.420
TOTAL INHOUSE	35.110	35.049
TOTAL INHOUSE RDT&E	25.258	24.782
ANNUAL OPERATING COST	15.461	18.333

PERSONNEL	PERSONNEL DATA (END OF FY 1976)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	265	1	31	234
CIVILIAN	954	5	194	760
TOTAL	1219	6	225	994

ACRES	SPACE AND PROPERTY			COST (MILLION \$)		
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
25048	694.300	4.351	296.170	994.821	18.000	29.000

### ...MISSION

PLAN CDT & REPT TESTS OF WPNS WPN SYS RKTS & GM SYS FIRE CON & TGT ACQ  
EQUIP ITEMS OF AMMO & MUN COMPONENTS CBT VHS OTHER AUTO MAT GEN EQUIP  
SUCH AS GENERATORS & AIR CONDS PROC INSP & CON ISSUE OF ARMOR PLATE FOR  
ALL DARCOM AMMO TEST PROV SUPPORT SVCS TO APS ELEMENTS & SUPPORTED CMDS

### ...CURRENT IMPORTANT PROGRAMS

DT I OF LEOPARD 2 TANK (FRG)  
ED OF ARMOR XM1 TANK SYS PROTECTION PLAN  
DT II OF MECHANIZED INFANTRY COMBAT VEH MICV XM723  
DT II OF XM198 155MM HOW TOWED AND PROPELLING CHARGES XM123 & XM164  
DT II OF LACV-30

### ...FUNCTIONS/EQUIPMENT/CAPABILITIES

TEST AREA 58000 ACRES. RANGE TO LAND IMPACT 21000 M. RANGE TO WATER IMPACT  
30000 M. 41 MI OF AUTMV CRS INCL 27 SP ENGR TEST CRS & OBSTACLES. VARIETY  
OF ENVIR DR COND EQUIP. SP CHAMBERS FOR SUBJECTING EQUIP TO DUST SALT  
SPRAY OR SOLAR RADN. ISOLATED VIBRATION TEST FAC WHICH PERMITS SHAKING  
EXPLO EQUIP SIMULTANEOUSLY WITH TEMP CONDITIONING FAC FOR CONTROLLED  
TESTS OF ELEC CON & GUIDANCE EQUIP. FREQ SOURCE WHICH PERMITS TESTING ALL  
TYPES OF MAT IN PRESENCE OF HIGH INTENSITY ELEC MAGNETIC RADN. SP FAC  
FOR TEST OF ARMOR PLATE. SP VEL & TGT EQUIP IS AVAIL FOR OBSERVATIONS  
DURING RAPID FIRE AS IS A RKT TRACK FOR CONTROLLED TERMINAL BALLISTIC  
TESTS. FAC AVAIL FOR TESTS OF SP ELECTRONIC & FIRE CON EQUIP & RELATED  
SYSTEMS & COMPONENTS.

INSTALLATION: MEDICAL BIOENGINEERING R&D LABORATORY

FORT DIETRICK, MD.

CDR COL CHARLES R. ANGEL

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RDT&E	2.836	2.532
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	0.593	0.494
TOTAL ANNUAL LAB	3.429	3.026
TOTAL INHOUSE	3.429	3.026
TOTAL INHOUSE RDT&E	2.836	2.532
ANNUAL OPERATING COST	0.924	0.815

PERSONNEL	PERSONNEL DATA (END OF FY 1976)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	27	10	27	0
CIVILIAN	81	12	34	47
TOTAL	108	22	61	47

ACRES	SPACE AND PROPERTY SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
5	44.325	27.300	35.631	107.256	2.918	2.157

#### ...MISSION

TO CONDUCT ENGINEERING RSCH AND DEV OF MIL MED EQUIP ON CONTINUING BASIS FOR ARMY AND ON AS ROR BASIS FOR NAVY AND AIRFORCE. CONDUCTS RSCH AND EXPLORATORY DEV OF MATERIEL DEVICES FOR INTERNAL AND EXTERNAL BIOMECHANICAL APPLICATIONS OF SPECIALIZED MILITARY AND MED INTEREST.

#### ...CURRENT IMPORTANT PROGRAMS

DEVELOPMENT OF ENVIRONMENTAL QUALITY STANDARDS FOR INSTALLATION RESTORATION. INDUSTRIAL HYGIENE-OCCUPATIONAL HEALTH RSCH STUDIES RELATED TO MILITARY ACTIVITIES. PILOT PLANT DEVELOPMENT FOR FULL-SCALE DESIGN OF MUST WATER PROCESSING ELEMENT. FIELD MEDICAL DEVICES AND LABORATORY EQUIPMENT. REDESIGN OF MUST EQUIPMENT.

#### ...FUNCTIONS/EQUIPMENT/CAPABILITIES

MAJOR EQUIP AND FACILITIES INCLUDE HUMAN METABOLIC WARD, SURGICAL OPERATING ROOMS, ENVIRONMENTAL ROOMS, GERM-FREE ANIMAL, SCANNING AND TRANSMISSION ELECTRON MICROSCOPES, AUTO ANALYZERS AND RECORDERS INCLUDING AUTO BETA AND GAMMA COUNTERS, SHADOW SHIELD WHOLE BODY COUNTER, GAMMA CAMERA, AUTO AMINO ACID ANALYZERS, AND MASS SPECTROMETER. RSCH INCLUDE NUTR SURVEYS AND RATION TESTING, BIOMED CMPT RSCH, BASIC AND APPLIED STUDIES OF TRACE MINERAL METABOLISM, EXERCISE AND FATIGUE IN MAN AND MILITARY DOG.

INSTALLATION: MEDICAL RESEARCH INST OF INFECTIOUS DISEASES FORT DETRICK, MD

CDR COL JOSEPH F. METZGER

TECH DIR DR WILLIAM R. BEISEL

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RDT&E	7.207	7.513
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	3.110	4.050
TOTAL ANNUAL LAB	10.317	11.563
TOTAL INHOUSE	10.317	11.563
TOTAL INHOUSE RDT&E	7.207	7.513
ANNUAL OPERATING COST	1.477	1.600

PERSONNEL	PERSONNEL DATA (END OF FY 1976)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	315	48	56	259
CIVILIAN	198	24	63	135
TOTAL	513	72	119	394

ACRES	SPACE AND PROPERTY			COST (MILLION \$)		
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
43	80.854	19.820	209.699	310.373	17.824	3.900

#### ...MISSION

TO PERFORM STUDIES ON PATHOGENESIS, DIAGNOSIS, PROPHYLAXIS, TREATMENT, AND EPIDEMIOLOGY OF NATURALLY OCCURRING INFECTIOUS DISEASES OF MIL IMPORTANCE AGAINST BIOLOGICAL AGENTS AND ON THOSE MICRO-ORGANISMS WHICH REQUIRE SPECIAL CONTAINMENT FACILITIES.

#### ...CURRENT IMPORTANT PROGRAMS

DEVELOPMENT OF NEW VACCINES AND TOXOIDS. IMMUNOLOGICAL STUDIES TO DETERMINE HOW TO IMPROVE VACCINE PROTECTION. STUDIES ON PATHOGENESIS OF MILITARILY IMPORTANT INFECTIONS. DEVELOPMENT OF MORE RAPID AND ACCURATE METHODS OF INFECTION DIAGNOSIS AND MEDICAL THERAPY FOR BW DEFENSE.

#### ...FUNCTIONS/EQUIPMENT/CAPABILITIES

TWO LARGE BUILDINGS PROVIDE ABOUT 300,000 SQUARE FEET OF SPACE AND CONTAIN TWENTY THREE MODERN LABORATORY SUITES WHICH REPRESENT THE LATEST IN FUNCTIONAL CONCEPTS, LABORATORY DESIGN AND SAFETY. A COMPLEX PROGRAM OF MEDICAL RSCH IS CONDUCTED AND INCLUDES IMMUNOLOGY, PATHOLOGY, PHYSIOLOGY, SEROLOGY, BIOCHEMISTRY, BIOPHYSICS, MOLECULAR BIOLOGY, AND TISSUE CULTURE. SPECIAL CAPABILITIES INCLUDE A VACCINE PRODUCTION SUITE, HOSPITAL FACILITIES FOR MEDICAL PATIENTS AND FOR RSCH STUDIES WITH VOLUNTEERS. USAMRIID RSCH IS SUPPORTED BY TWO COMPUTERS AND AN ANIMAL FARM.

INSTALLATION: MISSILE RES., DEV. AND ENGINEERING LAB

REDSTONE ARSENAL, AL.

CDR MG GEORGE E. TURNMEYER

DIR DR. JOHN L. MCDANIEL

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RDT&E	88.523	85.724
TOTAL PROCUREMENT	14.816	11.249
TOTAL O&M	6.044	5.614
TOTAL OTHER	1.485	1.292
TOTAL ANNUAL LAB	110.868	103.879
TOTAL INHOUSE	57.551	50.696
TOTAL INHOUSE RDT&E	38.599	36.491
ANNUAL OPERATING COST	8.636	8.750

PERSONNEL	PERSONNEL DATA (END OF FY 1976)				NON-PROF
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF		
MILITARY	36	1	28		8
CIVILIAN	1243	83	768		475
TOTAL	1279	84	796		483

ACRES	SPACE AND PROPERTY (THOUSANDS OF SQUARE FEET)			COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
11000	1175.000	262.000	408.000	1845.000	32.000	75.000

### ...MISSION

PLAN & CONDUCT RESEARCH, EXPLORATORY & ADVANCED DEVELOPMENT FOR ASSIGNED MATERIEL. EXECUTE MATERIEL DEV PROGRAMS NOT SELECTED FOR PROJ MGMT. PROVIDE SCIENTIFIC & ENGR SPT TO OTHER DARCOM OR DOD ELEMENTS WITH PROJ/SYS MGMT RESPONSIBILITY. DESIGN, DEV & FABRICATE PROTOTYPE MSL SYS COMPONENTS

### ...CURRENT IMPORTANT PROGRAMS

LASER TECHNOLOGY AND APPLICATIONS  
TERMINAL HOMING  
FREE FLIGHT ROCKET SYSTEMS  
TACTICAL SOFTWARE  
SIMULATION RESEARCH

### ...FUNCTIONS/EQUIPMENT/CAPABILITIES

OPERATE ARMY INERTIAL GUID MGMT & TECH CTR & ARMY RKT PROP TECH & MGMT CTR. PROVIDE SIMULATION SPT BY USE OF ADV SIMULATION FAC FOR EXPLORATORY, ADV & ENGR DEV PROGS. SERVE AS DARCOM LEAD LAB FOR GLC/TERM HOMING & HI ENERGY LASER TECHNOLOGY. AIRBORNE SENSOR MEASUREMENT PLATFORM, ADAPTIVE CORRELATION EVALUATOR, HEAT TREATING FAC, PROTOTYPE FABRICATION FAC, INTERACTIVE COMPUTER SYS ANALYZER, FLUIDIC DESIGN FAC, ADVANCED SIM FAC WITH CENTRAL CMPUTR COMPLEX & 3 SIMULATORS (INFRARED SYS, ELECTRO-OPTICAL SYS, RADIO FREQ SYS), GAS DYNAMIC LASER FAC, LASER RADAR FAC, SIGNATURE EVALUATION ENVIRONMT CHAMBER, FAILURE ANALYSIS FAC, STATIC TEST FAC, FLIGHT & TRACK TEST FAC, ELECTRO-MAGNETIC EFFECTS TEST FAC, HI ENERGY LASER LAB FAC, FEBETRON 705 FLASH X-RAY SYS, UNITRON VACUUM HOT STAGE METALLUGRAPH, ADVANCED RADAR DEV FAC.

INSTALLATION: MOBILITY EQUIPMENT R&D COMMAND

FT. BELVOIR VA

CDR COL B.C. HUGHES

TECH DIR MR TERENCE G. KIRKLAND

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RD&E	51.995	50.189
TOTAL PROCUREMENT	30.337	26.091
TOTAL O&M	13.171	14.890
TOTAL OTHER	1.958	1.500
TOTAL ANNUAL LAB	97.461	92.670
TOTAL INHOUSE	38.310	39.871
TOTAL INHOUSE RD&E	22.273	22.738
ANNUAL OPERATING COST	9.374	9.843

PERSONNEL	PERSONNEL DATA (END OF FY 1976)		TOTAL PROF	NON- PROF
	AUTHORIZED STRENGTH	TOTAL PHDS		
MILITARY	68	2	34	34
CIVILIAN	1207	21	429	778
TOTAL	1275	23	463	812

ACRES	SPACE AND PROPERTY			TOTAL	COST (MILLION \$)	
	SPACE (THOUSANDS OF SQUARE FEET)	LAB	ADMIN		OTHER	REAL PROP
1064	693.649	115.530	194.279	1003.458	49.542	30.000

#### ...MISSION

BASIC AND APPLIED RSCH DESIGN DEV PRODUCT AND PRODUCTION ENGRG STUZN AND DESIGN TESTING AND TEST EVAL ON ASSIGNED ITEMS OF EQUIP. OVERALL SUPERVISION OF USA FUELS AND LUBS LAB. ENGRG AND PROC SPT OF TOPO EQUIP. QUANTITY FIRST TIME BUYS OF ASSIGNED ITEMS. ASSIGNED SPT TO PROJECT/COMMODITY MGR

#### ...CURRENT IMPORTANT PROGRAMS

COUNTERMINE  
ELECTRICAL POWER GENERATION & DISTRIBUTION  
CONSTRUCTION EQUIPMENT  
CAMOUFLAGE  
FUELS & LUBRICATION MATERIALS

#### ...FUNCTIONS/EQUIPMENT/CAPABILITIES

ACCOMPLISH A THEORETICAL EXPERIMENTAL PROGRAM OF RSCH DEVELOPMENT AS ASSIGNED TO IDENTIFY, DESIGN DEVELOP EFFECTIVE EQUIPMENT/TECHNIQUES FOR ASSIGNED MISSION ITEMS. ITEMS INCLUDE: MINE NEUTRALIZATION, DETECTION EQUIP, EXPLOSIVES DETECTION TECHNIQUES, LONG RANGE SURFACE MINEFIELD DETECTION, FUELS, LUBRICANTS, SANITARY SCIENCES EQUIP, ELECTRICAL, ENVIRONMENTAL EQUIP, COUNTERSURV. ILLANCE TOPO EQUIP, MARINE, BRIDGE EQUIP, CONSTRUCTION, MECHANICAL, CCE EQUIP, INTRUSION DETECTION EQUIP, CONTROLLED ENVIRONMENTAL STORAGE, SHIPPING SYSTEM. FACILITIES INCLUDE RADIO FRQ ANECHOIC CHAMBER, DATA COLLECTION VAN, RAIL HUMP TEST FACILITY, COMBUSTION LAB, FUELS HANDLING, SURVEILLANCE FAC, BRIDGE TEST FAC, BATTERY TEST FAC, CLIMATIC TEST FAC, TROPIC TEST FAC, HUMAN FACTORS LAB, COMPUTER AID DESIGN, ENGR FAC, PICTORIAL SPT, INSTR FAC, POL ANALYSIS LAB.

INSTALLATION: MOBILITY SYSTEMS LABORATORY

WARREN MICHIGAN

CUR MG O.C. DECKER JR

CH SCI DR E PETRICK

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RDT&E	26.870	36.276
TOTAL PROCUREMENT	13.400	31.500
TOTAL O&M	8.564	10.189
TOTAL OTHER	0.547	0.245
TOTAL ANNUAL LAB	49.381	73.210
TOTAL INHOUSE	22.288	26.805
TOTAL INHOUSE RDT&E	10.742	15.566
ANNUAL OPERATING COST	0.954	0.989

PERSONNEL	PERSONNEL DATA (END OF FY 1976)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	37	1	14	23
CIVILIAN	838	10	276	562
TOTAL	875	11	290	585

ACRES	SPACE AND PROPERTY			COST (MILLION \$)		
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
43	458.568	126.433	62.644	647.645	20.970	7.500

#### ...MISSION

RESPONSIBLE FOR RESEARCH, CONCEPT, DESIGN, DEVELOPMENT, FABRICATION, PRODUCTION ENGINEERING PLANNING, SUPPORT TO PRODUCTION, FOR PRESENT AND FUTURE VEHICLES SYSTEMS AND SUB-SYSTEMS OF TANK AUTOMOTIVE MATERIAL AND ITS FUTURE SCIENCES

#### ...CURRENT IMPORTANT PROGRAMS

SIMPLIFIED TEST SUPT FOR INTERNAL COMBUSTION ENGINE POWERED MATERIAL SURVIVABILITY (HSTV-L)  
H1 MAG A  
L-163-S STRATIFIED CHARGE ENGINE  
M-113 MODERNIZATION

#### ...FUNCTIONS/EQUIPMENT/CAPABILITIES

VEHICLE BRAKE DYNAMOMETER  
VEHICLE SUBSYSTEM INTEGRATION  
ANALYTICAL PREDICTION OF MILITARY VEHICLE PERFORMANCE  
VEHICLE MOTION SIMULATOR  
RIVER SIMULATOR FACILITY AND LAND LOCOMOTION SOIL RING  
MINE PROTECTION  
VEHICLE SIGNATURE PROGRAM  
VALIDATION OF THE ARMY MOBILITY MODEL  
SIX DEGREE OF FREEDOM SIMULATOR  
METAL ANAL WITH MICROPROBE ELECTRON MICROSCOPE ANALYSER AND TECHNIQUES  
DEVELOPMENT OF IMPROVED ARMOR WELDING AND FABRICATION  
LOW TEMPERATURE, SHOCK AND VIBRATION TEST FACILITIES

INSTALLATION: NATICK R&D COMMAND

NATICK MASSACHUSETTS

CDR COL RUFUS E. LESTER

TECH. DIR. DR. DALE H. SIELING

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RDT&E	25.252	25.518
TOTAL PROCUREMENT	2.981	1.286
TOTAL O&M	13.826	13.785
TOTAL OTHER	1.447	1.494
TOTAL ANNUAL LAB	43.506	42.083
TOTAL INHOUSE	30.434	31.514
TOTAL INHOUSE RDT&E	15.837	17.682
ANNUAL OPERATING COST	6.264	6.404

PERSONNEL	PERSONNEL DATA (END OF FY 1976)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	104	5	22	82
CIVILIAN	1152	93	463	689
TOTAL	1256	98	485	771

ACRES	SPACE AND PROPERTY			COST (MILLION \$)		
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
2994	550.562	65.900	412.268	1028.730	25.878	15.856

#### ...MISSION

ACCOM ASG R-D IN THE PHYS AND BIOL SCI AND ENG TO MEET MIL RQR IN THE COMMODITY AREAS OF TEX CLO BODY ARMOR ORG MATLS INSECT AND FUNG SUBS CNTS FOOD SVC EQUIP FLD SPT EQUIP TENT AND EQUIP AND AIR DEL EQUIP IN DESIG CMDTY AREAS, PROV TECH AND ENG SPT IN CONNEX W/ACCOM OF AE AND STD

#### ...CURRENT IMPORTANT PROGRAMS

SUBSISTENCE TECHNOLOGY  
RADIATION PRESERVATION OF FOOD  
AIRDROP TECHNOLOGY  
ANALYSIS & DESIGN OF MILITARY FEEDING SYSTEMS  
CLOTHING, EQUIPMENT & PACKAGING TECHNOLOGY

#### ...FUNCTIONS/EQUIPMENT/CAPABILITIES

COBALT 60 IRRAD FACILITY DESIGNED FOR MAX FLEXIBILITY IN FOOD PROCESSING  
BACTERIOLOGY LAB EQUIP FOR INVESTIGATIONS OF PATHOGENIC MICROORGANISMS  
FLAME PROTECTION LAB AND FACILITY INCLUDING AN OUTDOOR FLAME PIT  
HIGH RESOLUTION MASS SPECTROMETER FOR ANALYSIS OF VOLATILE COMPOUNDS  
FOOD PROCESSING FAC FOR CONTROLLED PREPROCESSING AND PROC BY SEV TECHNI  
LAB SUBSONIC WIND TUNNEL CAPABLE OF VELOCITIES UP TO 110 FEET PER SEC  
HEAT TRANSFER LAB TO STUDY HEAT AND MASS TRANSPORT CHAR OF FABRICS  
ELECTRON LINEAR ACCELERATOR DESIGNED FOR HIGH POWER OUTPUT IN FOOD PROV  
DROP TEST FAC CONS OF 40 TON CAPACITY TRACKED CRANE AND A 50 FT BOOM  
DYEING AND FINISHING LAB FOR CONDUCTING STUDIES FOR TEXTILES  
FEBETRON MACHINE USED AS A RADIA SOURCE FOR PULSE RADIOLYSIS STUDIES  
RAIN ROOM DESIGNED TO DUPLICATE RAINFALL CORRESPONDING TO NATURAL RAIN

INSTALLATION: NIGHT VISION LABORATORY

FT. BELVOIR, VA.

ACT. DIR. MR. EDWARD J. SHEEHAN

DEP. DIR. MR JOHN JOHNSON

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RDT&E	40.954	51.182
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	0.000	0.000
TOTAL ANNUAL LAB	40.954	51.182
TOTAL INHOUSE	17.512	17.570
TOTAL INHOUSE RDT&E	17.512	17.570
ANNUAL OPERATING COST	1.599	1.758

PERSONNEL	PERSONNEL DATA (END OF FY 1976)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	28	0	7	21
CIVILIAN	410	31	207	203
TOTAL	438	31	214	224

ACRES	SPACE AND PROPERTY SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
21	73.261	3.521	67.207	143.989	43.961	40.905

#### ...MISSION

NVLIS RESPONSIBLE FOR PROVIDING A NIGHT VISION CAPABILITY TO ENABLE THE ARMY TO CARRY OUT OPERATIONS AT NIGHT WITH NEAR DAYLIGHT EFFICIENCY. THE SYSTEM DEVELOPMENT PROGRAM IS STRUCTURED AROUND A TECHNOLOGY BASE CONSISTING OF IMAGE INTENSIFICATION, FAR IR, RAD SOURCES AND VISIONICS.

#### ...CURRENT IMPORTANT PROGRAMS

COMMON MODULE PROGRAM  
GRAFENWOHR ELECTRO-OPTICAL SENSOR TRIALS  
THIRD GENERATION IMAGE INTENSIFIER PROGRAM  
SECOND GENERATION PRODUCTION PROGRAM  
ADVANCED 2ND GENERATION FLIR DEVELOPMENT

#### ...FUNCTIONS/EQUIPMENT/CAPABILITIES

NVL'S MOST SIGNIFICANT FACILITY CAPABILITIES - SEMICONDUCTOR MATERIALS RESEARCH, VISIONICS RESEARCH, DETECTOR FABRICATION, ELECTRONICS DESIGN, SEMICONDUCTOR LASER RESEARCH, COMMON MODULE, X-RAY ANALYSIS, SURFACE RESEARCH, DOPED SILICON CRYSTAL GROWTH, DETECTOR/FOCAL PLANE, INF TV CAMERA TUBE, INF OPTICAL TEST, TRANSMISSOMETER MEASUREMENT, TV EVALUATION, 3D MULTI-SPECTRAL SEARCH SIMULATOR.



INSTALLATION: PICATINNY ARSENAL LABORATORIES

DOVER, N.J.

CDR COL PETER KENYON

TECH DIR MR H.W. PAINTER

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	'77 (EST)
TOTAL RDT&E	85.400	75.745
TOTAL PROCUREMENT	30.964	27.745
TOTAL O&M	16.847	16.050
TOTAL OTHER	1.030	1.130
TOTAL ANNUAL LAB	134.241	120.670
TOTAL INHOUSE	86.194	76.747
TOTAL INHOUSE RDT&E	43.400	36.667
ANNUAL OPERATING COST	26.400	30.375

PERSONNEL	PERSONNEL DATA (END OF FY 1976)				NON- PROF
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF		
MILITARY	84	0	16	68	
CIVILIAN	4174	63	1603	2571	
TOTAL	4258	63	1619	2639	

ACRES	SPACE AND PROPERTY SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
5852	619.590	612.391	2643.053	3875.034	76.363	58.573

#### ...MISSION

CEN FOR LIFE CYCLE FUNC FOR BASIC AND APPLIED RSCH THRU DEVMT AND ENGRG OF NUC AND CONVL MUNS SUCH AS MINES, GRENS, RKT AND MSL WHDS, PROJS, FUZES, ENERGETIC MATLS ENGRG SCIENCE, HAZARDOUS MUNS CTMS, TECH OF MFG AND PROCS PROCS ALL NUC AND ASC CONVL MUNS, DOD PLASTIC CENTER.

#### ...CURRENT IMPORTANT PROGRAMS

PERSHING II WARHEAD SECTION  
ENERGETIC MATERIALS  
PROJ 8 INCH XM753  
PROJ 8 INCH HE XM650  
GROUND VEHICLE DISP MINE SYSTEM

#### ...FUNCTIONS/EQUIPMENT/CAPABILITIES

NUC WPNS, PROTOTYPE FAB AND ASSY, AND EXPLOS AND PROP PLT PLANTS PROV COMPL INTRGED FAC FOR ASSY, INSP AND TEST OF AK AND CONVL MUNS AND COMPS AND THE MFG AND PROCS OF EXPLOS AND PROP COMP. THE EXPLOS, PYRO, PROP, MATLS AND QA LABS HAVE UNUSUAL EQUIP FOR RSCH, RELIABILITY AND QA SUCH AS BETATRON, HIGH SPEED PHOTO AND SHOCK LOAD FAC, HIGH ALT TEST CHAMBERS, ELECTROMAGNETIC RADIATION INSP ETC. THE DEVMT AND ENVIRONMENTAL TEST AND EVAL FAC HAVE MAJOR CPBLTY AS STATIC AND DYNAMIC TEST RGS, DROP TOWERS, DUD RECOVY AND DISASSEMBLY, RF VULNERABILITY, COMPL ENVIRONMENTAL SIM, TARGET EFFS ETC. OTHER EQUIP INCL VIBRATORS FOR LOADS TO 2000 LB, STATIC RKT TEST RG, 2540 TON HYDROSTATIC PRESS, CMPT TAPE CON MFG EQUIP, VARIETY OF FUZE EVAL EQUIP, CLOSED CIRCUIT TV, HIGH ACCEL SLED TRACK.

INSTALLATION: R&D TECHNICAL SUPPORT ACTIVITY

FT. MONMOUTH, N.J.

DIR MR RICHARD L. JOHNSON

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RDT&E	10.120	12.694
TOTAL PROCUREMENT	1.300	1.592
TOTAL O&M	0.300	0.957
TOTAL OTHER	0.180	0.364
TOTAL ANNUAL LAB	11.900	15.607
TOTAL INHOUSE	11.665	15.217
TOTAL INHOUSE RDT&E	9.885	12.559
ANNUAL OPERATING COST	3.514	4.795

PERSONNEL	PERSONNEL DATA (END OF FY 1976)				NON- PROF
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF		
MILITARY	3	0	0		3
CIVILIAN	475	1	88		387
TOTAL	478	1	88		390

ACRES	SPACE AND PROPERTY			TOTAL	COST (MILLION \$)		
	SPACE (THOUSANDS OF SQUARE FEET)	ADMIN	OTHER		REAL PROP	EQUIP	
136	LAB	17.826	34.599	77.415	129.840	33.988	6.523

...MISSION

VULNERABILITY ANALYSIS  
ANTENNA MASTS AND MECHANICAL STRUCTURES  
VEHICULAR MARINE CRAFT AND SHELTER INSTALLATIONS  
COMPUTER AIDED DESIGN TECHNIQUES

...CURRENT IMPORTANT PROGRAMS

MECHANICAL ENGINEERING - AIRBORNE AND GROUND EQUIPMENT  
VULNERABILITY ANALYSIS  
ENVIRONMENTAL CRITERIA AND TEST FACILITIES  
VEHICULAR MARINE CRAFT AND SHELTER INSTALLATIONS  
COMPUTER AIDED DESIGN ENGINEERING AND MANUFACTURING

...FUNCTIONS/EQUIPMENT/CAPABILITIES

ELECTROMAGNETIC COMPATABILITY FOR RFI  
ENVIRONMENTAL CONTROL SYSTEMS  
ENVIRONMENTAL TEST FACILITIES  
MATHEMATICAL COMPUTATIONS AND STATISTICS  
EQUIPMENT DESIGN AND DRAFTING  
SPECIFICATION ENGINEERING  
AIRCRAFT VIBRATION MEASUREMENTS  
COMPUTER AIDED DESIGN  
MODEL SHOP FABRICATION - ALL CRAFTS  
METROLOGY  
TEST MEASURING EQUIPMENT CALIBRATION AND REPAIRS  
COMPUTER AIDED MANUFACTURING ENGINEERING

INSTALLATION: RESEARCH INST FOR BEHAVIORAL & SOCIAL SCI WASHINGTON, D.C.

CDR COL WILLIAM C. MAUS

TECH. DIR. DR. J.E. UHLANER

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RDT&E	19.667	22.783
TOTAL PROCUREMENT	0.000	0.000
TOTAL C&M	0.000	0.000
TOTAL OTHER	0.000	0.000
TOTAL ANNUAL LAB	19.667	22.783
TOTAL INHOUSE	8.123	11.007
TOTAL INHOUSE RDT&E	8.123	11.007
ANNUAL OPERATING COST	2.010	3.316

PERSONNEL	PERSONNEL DATA (END OF FY 1976)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	36	1	40	4
CIVILIAN	233	123	183	50
TOTAL	269	124	223	54

ACRES	SPACE AND PROPERTY SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
0	42.000	8.000	4.000	54.000	0.000	1.708

#### ...MISSION

RSCH & DEV PRGMS IN BEH & SOC SCI FOR DEPT ARMY IN INDIV TNG & PERF & IN ORGS & SYSTS- INCL RSCH TO IMPR INDIV & UNIT TNG & EVAL, PERS ACCES & UTILIZA, ENHANCE CAREER DEV & SOLDIER PROD, ENH EFF OF OPS IN CMD-CNTRL & TAC OPS, IMPV HUM PERF THRU ED TECH, TNG SIMULA, & ORG EFF ANALYSIS

#### ...CURRENT IMPORTANT PROGRAMS

MEAS OF ARMY ORG ENVIP DIFFS AND ARMY ORG EFFECTIVENESS  
NAP OF THE EARTH AND NIGHT FLIGHT TRAIN, FLT SIMULA - AVIATOR SELECTION AUTOMATION, SIMULA & EVAL IN SYST EMBEDDED TRNG- BATTLEFIELD INFC & MGT RSCH ON ACQ, RETEN, & ASSIGN. EFFIC OF MALE & FEMALE OFF & ENL PERSONNEL PERFORMANCE-BASED METH FOR IND & UNIT TNG, INCL TAC ENGAGEMENT SIMULA

#### ...FUNCTIONS/EQUIPMENT/CAPABILITIES

EIGHT CONUS FIELD UNITS & ONE EACH IN EUROPE & KOREA, LIAISON OFFICES AT TRADOC & IN LONDON SUPPORT IN-HSE RSCH PRGM MANAGED BY TWO LABORATORIES WITHIN WHICH ARE 7 TECH AREAS, 1 PERS ACCESSION & UTILIZA, 2 INDIV TNG & SKILL EVAL, 3 CAREER DEVEL & SOLDIER PRODUCTIVITY, 4 UNIT TNG & EVAL SYSTEMS, 5 BTLFLD INFC SYS, 6 EDUC TECHNOL & TNG SIMULA, 7 HUM FACTORS IN TAC OPS. IN-HSE EXPR FACILITIES INCL LABORATORY AREA. AN ARMY-OWNED IN-HSE COMPUTER PERMITS, WITHIN THE LABS, REAL-TIME EXPERIMENTATION. ADDITIONAL TERMINAL LINES TO EXTERNAL COMPUTERS INCR DATA STORAGE & PROV FLEXIBILITY. EXPR PRGM PERMITS WIDE RANGE OF LAB OPS TO TEST HUMAN PERF HYPOTHESES UNDER SIMULATED TACTICAL CONDITIONS.

INSTALLATION: RESEARCH INSTITUTE OF ENVIRONMENTAL MEDICINE NATICK, MASS.

CDR COL HARRY G. DANGERFIELD

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976	1977
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	3.540	3.546
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	1.050	1.174
TOTAL ANNUAL LAB	4.590	4.720
TOTAL INHOUSE	4.590	4.720
TOTAL INHOUSE RDT&E	3.540	3.546
ANNUAL OPERATING COST	1.052	0.767

PERSONNEL	PERSONNEL DATA (END OF FY 1976)				NON-PROF
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	PROF	
MILITARY	82	16	57	25	
CIVILIAN	80	20	37	43	
TOTAL	162	36	94	68	

ACRES	SPACE AND PROPERTY (THOUSANDS OF SQUARE FEET)			COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
4	60.401	16.563	28.647	107.631	3.663	2.695

#### ...MISSION

TO CONDUCT RSCH ON INTERACTION OF CLOTHING AND EQUIP WITH WORK PHYSIOLOGY AND THE EFF OF EXTREME HEAT, COLD, AND HIGH TERRESTRIAL ALT ON PHYSIOLOGICAL AND FUNCTIONAL CAPACITY, AND METH FOR REDUCING THESE EFFECTS.

#### ...CURRENT IMPORTANT PROGRAMS

PREVENTION AND TREATMENT OF DISABILITIES DUE TO MILITARY OPERATIONS IN THE EXTREME ENVIRONMENTS. PREDICTION OF LIMITS OF MILITARY PERFORMANCE AS A FUNCTION OF ENVIRONMENT, CLOTHING, AND EQUIPMENT. EVALUATION OF PHYSICAL FITNESS TRAINING PROGRAMS. BIOLOGICAL PROCESSES THAT LIMIT HEAVY PHYSICAL WORK. MEDICAL PROBLEMS IN MILITARY ARTIC OPERATIONS.

#### ...FUNCTIONS/EQUIPMENT/CAPABILITIES

CONDUCT RSCH AND PROVIDE GUIDANCE TO DESIGNERS, ENGINEERS, TACTICIANS, PLANNERS AND PHYSIANS ON MILITARY PERFORMANCE AND CASUALTY PREVENTION AND TREATMENT IN EXTREME CLIMATES AND ENGINEERED ENVIRONMENTS, ADVISE ON HEALTH AND SAFETY IN MANEUVERS DURING HEAT, COLD, OR HYPOXIC STRESS. MAJOR EQUIPMENT INCLUDES ANIMAL CARE FACILITIES, ELECTRON MICROSCOPE, UNDERWATER RESEARCH POOL, COPPER MANIKINS, AND DIVERSE EQUIPMENT FOR BIOMEDICAL, BIOPHYSICAL, MEDICAL, PHYSIOLOGICAL, PHARMACOLOGICAL, AND PSYCHOLOGICAL MEASUREMENT. FIELD FACILITIES INCLUDE LABORATORIES AT PIKE'S PEAK, CO AND FORT MAINWRIGHT, AK.

INSTALLATION: TROPIC TEST CENTER

FT. CLAYTON, C.Z.

CDR COL WENDELL L. PRINCE

TECH DIR MR FRANK S. MENDEZ

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RDT&E	2.296	2.305
TOTAL PROCUREMENT	0.224	0.025
TOTAL C&M	0.004	0.006
TOTAL OTHER	2.367	2.485
TOTAL ANNUAL LAB	4.891	4.821
TOTAL INHOUSE	4.683	4.659
TOTAL INHOUSE RDT&E	2.151	2.143
ANNUAL OPERATING COST	0.564	0.591

PERSONNEL	PERSONNEL DATA (END OF FY 1976)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	77	0	14	63
CIVILIAN	62	5	18	44
TOTAL	139	5	32	107

ACRES	SPACE AND PROPERTY SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
18866	18.782	20.000	87.310	136.092	1.033	1.699

...MISSION

PLAN, CONDUCT AND REPORT ON ENVIRONMENTAL PHASES OF DEVELOPMENT TEST 11, AND OTHER DEVELOPMENTAL TYPE TESTS. PROVIDE ADVICE AND GUIDANCE ON TESTS AND EVALUATION MATTERS TO MATERIAL DEVELOPERS, MATERIAL PRODUCERS, OTHER SERVICES, AND PRIVATE INDUSTRY.

...CURRENT IMPORTANT PROGRAMS

PERSONNEL ARMOR SYSTEM GROUND TROOP (PASGT)  
81 MM HIGH EXPLOSIVE  
POL TANKS (3000/10000/50000 GALLON) FABRIC TYPE  
PSYCHO-PHYSICAL MEASUREMENT TECHNIQUES (ILIR)  
TEST METHODOLOGY AND R AND D INSTRUMENTATION PROGRAMS

...FUNCTIONS/EQUIPMENT/CAPABILITIES

TEST FACILITIES AND LABORATORIES WITH INSTRUMENTS AND EQUIPMENT FOR CONDUCTING TROPIC TESTS OF DOD MATERIEL IN THE NATURAL ENVIRONMENT INCLUDE. ENGINEERING, HUMAN FACTORS, CHEMICAL, MICROBIOLOGICAL, MATERIALS, SOILS, CALIBRATION, PHOTOGRAPHIC AND NIGHT VISION SENSOR / OPTICAL LABORATORIES. OTHER TEST RESOURCES CONSIST OF FIRING RANGES, NATURAL TERRAIN MOBILITY COURSES, AMMO TEST STORAGE AND FUNCTIONING AREAS, JUNGLE, GRASS AND COASTAL MATERIEL EXPOSURE SITES, JUNGLE RADIO RANGING SITES, POL TANK FARM, MAN-PACK PORTABILITY COURSE, CALIBRATED SEISMIC DETECTION AND CHEMICAL TEST GRIDS AND 18,000 ACRES OF BROADLEAF EVERGREEN TREES, SEMIDECIDUOUS TREES, MARSHLAND, GRASSLAND, CORAL REEFS, FLAT AND HILLY TERRAIN AND ALL TYPES OF TROPIC VEGETATION.

INSTALLATION: WALTER REED ARMY INSTITUTE OF RESEARCH

WASHINGTON, D.C.

CDR COL GARRISON RAPMUND

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RDT&E	15.146	15.240
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	2.318	1.846
TOTAL OTHER	6.104	6.423
TOTAL ANNUAL LAB	23.568	23.509
TOTAL INHOUSE	23.568	23.509
TOTAL INHOUSE RDT&E	15.146	15.240
ANNUAL OPERATING COST	4.073	4.973

PERSONNEL	PERSONNEL DATA (END OF FY 1976)				NON-PROF
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF		
MILITARY	456	131	430		26
CIVILIAN	500	63	511		11
TOTAL	956	194	941		37

ACRES	SPACE AND PROPERTY (THOUSANDS OF SQUARE FEET)			COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL REAL PROP	EQUIP	
206	382.494	58.360	0.000	440.854	9.165	15.224

#### ...MISSION

TO PERFORM GEN MIL MED RSCH CAPABILITY, AND RSCH IN AREAS OF COMBAT SURG, COMBAT PSYCH, GASTRO-INTESTINAL DIS, RENAL DIS, HEMATOLOGY, AND BIOLOGICAL EFF OF MICROWAVE IRRADIATION. TED PERS.

#### ...CURRENT IMPORTANT PROGRAMS

TO DISCOVER EFF PREVENTIVE AND TREATMENT AGENTS FOR CONTROL OF DRUG RESISTANT MALARIA. DEFINE EPIDEMIOLOGY OF PSYCHIATRIC-BEHAVIORAL DISORDERS IN SOLDIERS. MOLECULAR PHARMACOLOGY STUDY OF CHEMOTHERAPEUTIC DRUGS TO DEV MODES FOR CONTROL OF ADENOVIRUSES AND RESPIRATORY DISEASES. DEV IMPROVED SURG MANAGEMENT OF SEVERELY INJURED COMBAT CASUALTIES.

#### ...FUNCTIONS/EQUIPMENT/CAPABILITIES

RSCH, TEACHING AND REFERENCE LABORATORY SERVICES SUMMARIZE MAJOR FUNCTIONS IN THE AREAS OF PREVENTIVE MEDICINE, INFECTIOUS DISEASES, SURGERY, NEUROPSYCHIATRY RELATED DISEASES, INTERNAL MEDICINE, MEDICAL CHEMISTRY, AND BASIC MEDICAL SCIENCES. MAJOR EQUIPMENT INCLUDES ELECTRON MICROSCOPES, AUTOMATED CHEMICAL ANALYSIS SYSTEMS, CHEMICAL TYPING WRITERS, BEHAVIORAL RSCH INSTRUMENTATION. WRAIR MAINTAINS LABORATORY AND RSCH FACILITIES AT FT MEADE, MD, SEATO HQ, BANGKOK, THAILAND, BRAZIL, SOUTH AMERICA AND KENYA. WRAIR IS CAPABLE OF CONDUCTING RSCH IN A VAST NUMBER OF AREAS.

INSTALLATION: WHITE SANDS MISSILE RANGE

WHITE SANDS MR, N.M.

CDR MG ORVILLE L. TOBIASON

TECH. DIR. DR. RICHARD H. DUNCAN

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RDT&E	103.815	126.265
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.653	0.647
TOTAL OTHER	15.179	11.051
TOTAL ANNUAL LAB	119.647	137.963
TOTAL INHOUSE	90.577	102.522
TOTAL INHOUSE RDT&E	80.936	91.268
ANNUAL OPERATING COST	78.645	99.556

PERSONNEL	PERSONNEL DATA (END OF FY 1976)				NON- PROF
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF		
MILITARY	931	0	382		549
CIVILIAN	3657	47	1006		2651
TOTAL	4788	47	1388		3400

ACRES	SPACE AND PROPERTY				COST (MILLION \$)	
	SPACE (THOUSANDS OF SQUARE FEET)				TOTAL REAL PROP	EQUIP
	LAB	ADMIN	OTHER	TOTAL		
4214377	1430.159	436.106	2848.369	4714.634	176.983	168.046

...MISSION

OPERATE A NATIONAL MISSILE RANGE FOR SUPPORT OF ALL APPROVED MISSILE AND RELATED TEST PROGRAMS. INDEPENDENTLY TEST AND EVALUATE ARMY MISSILE AND ROCKET SYSTEMS. ENGINEER AND DEVELOP RANGE INSTRUMENTATION SYSTEMS FOR GATHERING TEST DATA.

...CURRENT IMPORTANT PROGRAMS

PULSE-DOPPLER RADAR APPLICATIONS. USE OF GLOS C SATELLITE TO CALIBRATE RADARS. LASER RANGING AND TRACKING SYSTEM. TESTING OF DRONE FORMATION CONTROL SYSTEM FOR MULTIPLE ENGAGEMENT AIR DEFENSE. LASER TEST FACILITY INSTRUMENTATION.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

GROUND AND FLIGHT SAFETY. OBTAINING FLIGHT TRAJECTORY AND EVENT DATA. RECOVERING MISSILES OR PORTIONS THEREOF. REDUCING AND PUTTING INTO READABLE FORMS DATA COLLECTED BY RANGE INSTRUMENTS. ENGINEERING AND DEVELOPMENT OF RANGE INSTRUMENTATION. INDEPENDENTLY TEST AND EVALUATE ARMY WEAPONS SYSTEMS. EVALUATE GUIDANCE AND CONTROL SYSTEMS, STRUCTURAL INTEGRITY, PROPULSION SYSTEMS, ELECTROMAGNETIC RADIATION EFFECTS. ANALYSIS OF CHEMICAL AND METALLOGRAPHIC EFFECTS, MICROBIOLOGICAL EFFECTS, CLIMATIC ENVIRONMENTAL EFFECTS. TEST AND EVALUATE WARHEADS AND SPECIAL WEAPONS. WEAPONS SIMULATION. NUCLEAR EFFECTS TESTING. SOLAR FURNACE. COUNTER-COUNTER MEASURES TESTING. ELECTRONIC AND OPTICAL TRACKING SENSORS AND DATA TRANSMISSION REQUIRED TO PROVIDE TEST DATA ON MISSILES AND RELATED PROGRAMS.

INSTALLATION: YUMA PROVING GROUND

YUMA, ARIZONA

CDR JERRY M. BUNYARD

TECH. DIR. RICHARD H. MILLER

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RDT&E	19.126	15.086
TOTAL PROCUREMENT	3.566	2.126
TOTAL O&M	0.844	0.564
TOTAL OTHER	9.928	11.911
TOTAL ANNUAL LAB	33.464	29.687
TOTAL INHOUSE	31.167	22.709
TOTAL INHOUSE RDT&E	19.126	15.086
ANNUAL OPERATING COST	7.963	10.192

PERSONNEL	PERSONNEL DATA (END OF FY 1976)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	383	0	65	318
CIVILIAN	875	0	102	773
TOTAL	1258	0	167	1091

ACRES	SPACE AND PROPERTY			COST (MILLION \$)		
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
870365	92.868	98.254	1210.338	1401.460	44.136	73.881

...MISSION

PLAN, CONDUCT, SPT ET AIR DEL EQUIP, L-RNGE TUBE ARTY, ACFT WPNS SYS, MOB  
EQUIP PLAN, CONDUCT, RPT DESERT ENV TEST SPT ARCTIC ENV TESTS  
PROVIDE TEST, EVAL ADVICE, GUIDANCE TO PROSPECTIVE FACILITY USERS  
DEVEL, MAINT MASTER PLAN FOR INST, FACIL, METHOD, TECH TEST EXPERTISE

...CURRENT IMPORTANT PROGRAMS

MECHANIZED INFANTRY COMBAT VEHICLE MICV XM723  
AN/TPQ-36 HOSTILE WEAPON LOCATION SYSTEM  
PROJECTILE 9 INCH M422  
HOWITZER 155MM XM198  
HELICOPTER AH1Q TOW CGBRA

...FUNCTIONS/EQUIPMENT/CAPABILITIES

INSTRUMENTED ARTILLERY RANGE  
VEHICLE MOBILITY TEST RANGES AND FACILITY  
INSTRUMENTED AIRCRAFT ARMAMENT RANGE  
REAL TIME CINETHEDOLITE SYSTEM  
LASER RANGE TRACKER  
POSITION LOCATING DATA COMMUNICATION SYSTEM  
INSTRUMENTED DROP ZONES  
ENGINEERING TEST FACILITY  
INSTRUMENTATION CALIBRATION FACILITY  
SCIENTIFIC COMPUTER CENTER  
ENVIRONMENTAL TEST FACILITIES  
WEAPONS EVALUATION FACILITY



DEPARTMENT OF THE NAVY

INSTALLATION: AEROSPACE MEDICAL RESEARCH LABORATORY

PENSACOLA FL

C.O. CAPT R.E. MITCHELL

TECH. ADV. DR. A. GARYSIEL

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RD&E	5.399	4.976
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	0.773	0.800
TOTAL ANNUAL LAB	6.172	5.776
TOTAL INHOUSE	6.172	5.776
TOTAL INHOUSE RD&E	5.399	4.976
ANNUAL OPERATING COST	0.964	0.964

PERSONNEL	PERSONNEL DATA (END OF FY 1976)		TOTAL	NON-PROF
	AUTHORIZED STRENGTH	PHDS		
MILITARY	58	18	26	32
CIVILIAN	119	18	44	75
TOTAL	177	36	70	107

ACRES	SPACE AND PROPERTY (THOUSANDS OF SQUARE FEET)			TOTAL	COST (MILLION \$)	
	LAB	ADMIN	OTHER		REAL PROP	EQUIP
1	212.000	46.500	12.000	270.500	3.130	3.162

...MISSION

CONDUCT RESEARCH DEVELOPMENT TEST AND EVALUATION IN AEROSPACE MEDICINE AND RELATED SCIENTIFIC AREAS APPLICABLE TO AEROSPACE SYSTEMS

...CURRENT IMPORTANT PROGRAMS

PHYSIOLOGICAL EFFECTS OF IONIZING RADIATION  
HUMAN DYNAMIC RESPONSE TO IMPACT ACCELERATION AND VIBRATION  
PREVENTION OF DISORIENTATION AND VESTIBULAR DISTURBANCES IN FLIGHT  
AVIATION PERSONNEL PROCUREMENT SELECTION AND RETENTION  
VISUAL TARGET ACQUISITION

...FUNCTIONS/EQUIPMENT/CAPABILITIES

NONIONIZING RADIATION FACILITY WITH MICROWAVE AND EXTREMELY LOW FREQUENCY- IMPACT ACCELERATION FACILITY WITH 225000 LB THRUST HORIZONTAL ACCELERATOR AND 2 SLEDS MAX 200G AND 356.40000 LB THRUST VERTICAL ACCELERATOR WITH 300 FPS X-RAY CINEMATOGRAPHY DEVICE. VIBRATION SHAKER 28000 LB THRUST, EQUIPED FOR HUMAN AND ANIMAL EXPERIMENTS IN UNUSUAL FORCE ACoustical, ELECTROMAGNETIC AND ATMOSPHERIC ENVIRONMENTS, VIVARIUM WITH OPERATING SUITE. DEVELOP TESTS FOR PSYCHOLOGICAL APTITUDES AND TOLERANCE TO STRESS, SLOW ROTATION ROOM; CORIOLIS ACCELERATION PLATFORM. HUMAN DISORIENTATION DEVICE; STILLE-WERNER CHAIR; OFF VERTICAL ROTATING CHAIR ANACHDIOIC AND REVERBERANT CHAMBERS, PERIODIC ANGULAR ROTATOR ELECTRIC POSTURE TABLE. ECHOCARDIOGRAPHIC AND VECTOR CARDIOGRAPHS. VISUAL DETECTION FACILITY PROGRAMMABLE HEADS-UP-DISPLAY, EYETRACTER. ELECTRON MICROSCOPE.

INSTALLATION: AIR DEVELOPMENT CENTER

JOHNSVILLE PA

C.O. CAPT C. RIGSBEE

TECH. DIR. DR. R.K. LOBB

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RD&E	123.360	129.687
TOTAL PROCUREMENT	49.226	61.798
TOTAL O&M	19.004	20.953
TOTAL OTHER	3.009	2.562
TOTAL ANNUAL LAB	193.599	215.000
TOTAL INHOUSE	76.132	78.452
TOTAL INHOUSE RD&E	53.159	52.402
ANNUAL OPERATING COST	23.026	22.779

PERSONNEL	PERSONNEL DATA (END OF FY 1976)				NON-PROF
	AUTHORIZED STRENGTH	TOTAL PHOS	TOTAL PROF		
MILITARY	291	3	66		225
CIVILIAN	2349	35	1160		1189
TOTAL	2640	38	1226		1414

ACRES	SPACE AND PROPERTY SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
750	833.000	43.000	451.000	1327.000	25.585	32.043

...MISSION

TO BE THE PRINCIPAL NAVY RD&E CENTER FOR NAVAL AIRCRAFT SYSTEMS  
LESS AIRCRAFT LAUNCHED WEAPON SYSTEMS

...CURRENT IMPORTANT PROGRAMS

TACTICAL SUPPORT CENTER  
P-3C, S-3A, F-14 & NACF, WEAPON SYSTEMS  
LIGHT AIRBORNE MULTI-PURPOSE SYSTEMS  
ADVANCED SIGNAL PROCESSOR  
MYSTIC LINK

...FUNCTIONS/EQUIPMENT/CAPABILITIES

AIRCRAFT SYSTEMS SIMULATION, AIRBORNE SEARCH & RESCUE, INERTIAL  
NAVIGATION TECHNOLOGY, AIR VEHICLE TECHNOLOGY (STRUCTURES, MATERIALS,  
FLIGHT DYNAMICS, PERFORMANCE, FLIGHT CONTROL) AIRBORNE ASW SYSTEMS,  
DEVELOP & INTEGRATION OF AIRBORNE SYSTEMS INCLUDING ELECTRONIC  
SURVEILLANCE AND COUNTER MEASURES, COMMUNICATIONS, NAVIGATION INFORMATION  
PROCESSING & DISPLAY, ENVIRONMENTAL SENSING (ELECTROMAGNETIC/MAGNETIC,  
ACOUSTIC, ELECTRO-OPTIC, AND PHOTOGRAPHIC), A/C SUPPORT SYSTEMS, A/C COST  
METHODOLOGY AND LOGISTICS, AEROSPACE MEDICINE AND AVIATION PHYSIOLOGY  
AND SUPPORT TO OTHER ACTIVITIES AS DIRECTED

INSTALLATION: AIR ENGINEERING CENTER

LAKEHURST NJ

C.O. CAPT. R. R. GRAYSON

TECH. DIR. MP. W.J. COX

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RDT&E	20.880	18.114
TOTAL PROCUREMENT	35.806	37.614
TOTAL O&M	22.247	20.093
TOTAL OTHER	5.974	5.822
TOTAL ANNUAL LAB	84.907	81.643
TOTAL INHOUSE	41.382	37.895
TOTAL INHOUSE RDT&E	18.768	15.270
ANNUAL OPERATING COST	9.509	10.280

PERSONNEL	PERSONNEL DATA (END OF FY 1976)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	230	1	37	193
CIVILIAN	1667	2	359	1308
TOTAL	1897	3	396	1501

ACRES	SPACE AND PROPERTY			COST (MILLION \$)		
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
7416	257.984	130.677	2278.739	2667.400	82.981	15.800

#### ...MISSION

CONDUCT PRGMS OF RSCH, ENGR, DEV, DEV TEST, SYS INTGRN, LTD PROD, PROC & FLEET ENGR SUPRT IN; A/C LAUNCH,RCVRY, & LNDG AID SYS, & GRO SUPRT EQUIP FOR A/C & ARBRN WPN SYS. SUPRT DOD STU & SPEC PRGMS. PRVD AVIATN & OTHER FACLT IN SUPRT OF ASSGND PRGMS & FOR OTHR ACTVS AS DSGND BY APPRO AUTH.

#### ...CURRENT IMPORTANT PROGRAMS

STORED ENERGY, ROTARY DRIVE, AIRCRAFT LAUNCHING SYSTEMS  
RECOVERY SYSTEM FOR HELICOPTERS ABOARD SHIP (RAST)  
TRIBOLOGY (STUDY OF WEAR) TECHNOLOGY BASE PROGRAM  
AUTOMATIC TEST EQUIPMENT FOR AVIONICS SUPPORT AND AVIONICS READINESS  
VERTICAL, SHORT, TAKE OFF AND LANDING (VISTOL) OPTICAL LANDING SYSTEM

#### ...FUNCTIONS/EQUIPMENT/CAPABILITIES

TEST FACILITIES FOR EVALUATION OF 1 TO 1 1/2 INCH DIAMETER WIRE ROPE AND ATTACHMENTS, DEVELOPMENT AND SERVICE LIFE SIMULATION OF HYDRAULIC, PNEUMATIC AND ELECTRICAL COMPONENTS/SUB-SYSTEMS. MOCK-UP OF AIR LAUNCHED WEAPONS HANDLING AND STORAGE FACILITIES ON AIRCRAFT CARRIERS, AIRCRAFT CARRIER OPERATIONAL ANALYSIS ROOM FOR STUDYING SPOTTING AND SERVICING CAPABILITIES ON FLIGHT AND HANGAR DECKS, MACHINE SHOP WITH CONVENTIONAL AND AUTOMATED MACHINE TOOLS CAPABLE OF PROTOTYPE AND LIMITED PRODUCTION. VACUUM FURNACE FOR HEAT TREATING. ELECTRON BEAM WELDER. CRYOGENICS FACILITY. RAPID LOAD TEST MACHINE. TRIBOLOGY (STUDY OF WEAR) LABORATORY. NOISE MEASUREMENT LAB. ULTRASONIC CLEANING LAB. AVIONICS SUPPORT FAC. ELECTRIC POWER & ELECTRONIC SUPPORT FAC. NON DESTRUCTIVE EVAL. LAB. COMPUTER TELEPROCESSING FAC. USING TIME-SHARING CENTERS FOR ENGR. ANALYSIS.

INSTALLATION: AIR PROPULSION TEST CENTER

TRENTON,NJ

C.C. CAPT W.C. BENTLEY

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RDT&E	16.998	19.565
TOTAL PROCUREMENT	3.403	3.284
TOTAL O&M	0.293	0.500
TOTAL OTHER	0.616	0.441
TOTAL ANNUAL LAB	21.310	23.790
TOTAL INHOUSE	14.302	16.460
TOTAL INHOUSE RDT&E	11.204	13.332
ANNUAL OPERATING COST	3.947	4.384

PERSONNEL	PERSONNEL DATA (END OF FY 1976)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	8	0	8	0
CIVILIAN	619	2	159	460
TOTAL	627	2	167	460

ACRES	SPACE AND PROPERTY (THOUSANDS OF SQUARE FEET)			COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
68	391.044	37.520	190.173	618.737	50.497	11.173

#### ...MISSION

TEST AND EVALUATE AIR BREATHING GAS TURBINE PROPULSION SYSTEMS, THEIR COMPONENTS, ACCESSORIES, FUEL AND LUBRICANTS, AND PERFORM APPLIED RESEARCH AND DEVELOPMENT LEADING TO NEW PROPULSION SYSTEMS & CORRECTION OF DESIGN DEFICIENCIES AND SERVICE PROBLEMS.

#### ...CURRENT IMPORTANT PROGRAMS

F404-GE-400 EXPLORATORY AND DEVELOPMENT TEST SUPPORT  
 TF41-A-2 ENGINE COMBUSTOR AND SIMULATED FLIGHT ENDURANCE TESTS  
 TF34-GE-2/400 ENGINE MISSION ENDURANCE/ALTITUDE STARTING AND PERF TESTS  
 TF30-P-412 ENGINE-750- HOUR MISSION ENDURANCE TEST  
 SEA LAUNCHED CRUISE MISSILE (SLCM) ENGINE DEVELOPMENT FLIGHT RATING TEST

#### ...FUNCTIONS/EQUIPMENT/CAPABILITIES

TEST CELLS FOR SIMULATING ALTITUDE & ENVIRONMENTAL CONDITIONS OF FLIGHT. SIMULATION CAPABILITY, SEA LEVEL TO 100000 FEET; MINUS 65 DEGREES F TO PLUS 650 DEGREES F; FLIGHT TO MACH 3. THREE LARGE ALTITUDE CELLS, FOUR SMALL ALTITUDE CELLS USED TO TEST ANY ENGINE IN NAVY INVENTORY OR PLANNED. IN ADDITION TO TURBOJET/FAN TURBOSHAFT/PROP ENGINES, NAPTIC TESTS AND EVALUATES PROPELLERS, HELICOPTER TRANSMISSIONS, STARTERS, AUXILIARY POWER UNITS, ROTORS FOR LCF AND CONTAINMENT, AIRCRAFT AND ENGINE FUEL SYSTEM COMPONENTS, AND OTHER ASSOCIATED HARDWARE. PERFORMS RESEARCH AND DEVELOPMENT RELATED TO ADVANCED LUBRICATING OILS, ENGINE OIL-WETTED COMPONENTS, ADVANCED & SYNTHETIC A/C FUELS & ENGINE AIR POLLUTION, NAPTIC QUAL ALL A/C ENGINE OILS, MANAGES NAVY EXPL AND ADVANCED DEVEL PRGMS, PROVIDES ADMN AND TECH DIR TO SELECTED CONTRACTS FOR NAVAIR.

INSTALLATION: AIR TEST CENTER

PATUXENT RIVER MD

C.O. RADM J.H.FOXGROVER

TECH. DIR. MR. JOHN B. PARADIS

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL ROT&E	56.656	62.662
TOTAL PROCUREMENT	16.232	16.113
TOTAL O&M	8.709	10.907
TOTAL OTHER	18.479	21.096
TOTAL ANNUAL LAB	100.076	110.778
TOTAL INHOUSE	83.953	87.255
TOTAL INHOUSE ROT&E	47.582	49.886
ANNUAL OPERATING COST	40.477	45.025

PERSONNEL	PERSONNEL DATA (END OF FY 1976)				NON-PROF
	AUTHORIZED STRENGTH	TOTAL PHOS	TOTAL PROF	TOTAL	
MILITARY	1520	3	192	1328	
CIVILIAN	2262	7	317	1945	
TOTAL	3782	10	509	3273	

ACRES	SPACE AND PROPERTY			COST (MILLION \$)		
	SPACE (THOUSANDS OF SQUARE FEET)	LAB	ADMIN	OTHER	TOTAL REAL PROP	EQUIP
6638	15.125	483.032	4419.105	4917.262	150.632	17.157

#### ...MISSION

EVAL & BIS TRIALS, TRAIN TEST PILOTS, TEST & EVALUATE TOTAL AIRCRAFT, THEIR MISSION SYSTEMS & ALL SUBSYSTEMS & COMPONENTS, RELATED SUPPORT SYSTEMS & ILS. PROVIDE TECHNICAL ADVICE & ASSISTANCE TO NASC & OTHERS, TO TRAIN TEST PILOTS & TO DEVELOP AIRCRAFT TESTING TECHNOLOGY.

#### ...CURRENT IMPORTANT PROGRAMS

TEST & EVALUATION OF ALL NEW AIRCRAFT & THEIR SYSTEMS F14, S3A, F18, E2C, P3C, A6, A7, AH1J, LAMPS, EP3E, AL/A7 TRAM, AV6A. ALSO GROUND SUPPORT EQUIPMENT A/C COMPUTERS & SOFTWARE, RELIABILITY & MAINTAINABILITY, HUMAN FACTORS, ELECTRONIC WARFARE CAPABILITIES, ELECTRONIC COMPATIBILITY, CARRIER SUITABILITY, ACLS, AIRCRAFT, CARRIER & AIRFIELD CERTIFICATIONS.

#### ...FUNCTIONS/EQUIPMENT/CAPABILITIES

LARGE RESTRICTED AIRSPACE, REAL TIME RANGE & AIRCRAFT TEST DATA PROCESSING, CATAPULT & ARRESTING GEARS, ACLS SITES, ELECTROMAGNETIC SHIELD HANGAR, GUN FIRING TUNNELS, ENVIRONMENTAL TESTING FACILITIES, ELECTRICAL POWER & CONTROL TESTING LABS, INSTRUMENTED SONOBUCY RANGE, ASW TACTICAL SUPPORT CENTER, ASW SYSTEMS LABS, BIOMEDICAL & HUMAN FACTORS LABS, EXTENSIVE INSTRUMENTATION DESIGN & CONSTRUCTION FACILITIES, COMPUTER & SOFTWARE T&E LABS, WATER EDGE LOW ELECTROMAGNETIC NOISE TEST AREA, ELECTRO OPTICAL TARGETS & TEST RANGE, ENGINE TEST CELL & THRUST STAND, BROADBAND EW TEST RANGE, VSTOL TEST SITE, SURFACE EFFECT SHIP TEST FACILITY.

INSTALLATION: AIR TEST FACILITY (SHIP INSTALLATIONS)

LAKEHURST NJ

C.O. CAPT F.W. HILL

TECH. COORD. MR. NICHOLAS IVANOVIC

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RDT&E	2.568	5.392
TOTAL PROCUREMENT	3.792	4.765
TOTAL C&M	3.794	4.061
TOTAL OTHER	1.281	1.060
TOTAL ANNUAL LAB	11.435	15.278
TOTAL INHOUSE	10.387	11.781
TOTAL INHOUSE RDT&E	1.712	2.188
ANNUAL OPERATING COST	4.728	4.631

PERSONNEL	PERSONNEL DATA (END OF FY 1976)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	110	0	13	97
CIVILIAN	350	1	74	276
TOTAL	460	1	87	373

ACRES	SPACE AND PROPERTY SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
4000	67.612	15.113	99.056	181.781	37.694	6.818

#### ...MISSION

TO CONDUCT TESTS AND EVAL OF LAUNCHING, RECOVERY, AND VISUAL LANDING AIDS SYSTEMS AND RELATED EQUIPMENT. PROVIDE TEST SITES, FACILITIES, AND SUPPORT SERVICES FOR DEV TESTS OF THESE EQUIPMENTS. CONDUCT R AND D OF EQUIPMENT AND INSTRUMENTATION USED IN TEST AND EVAL OF SAID EQUIPMENT.

#### ...CURRENT IMPORTANT PROGRAMS

MK14 ROTARY ARRESTING GEAR DEV, TECHEVAL AND OPEVAL  
F-14 AIRCRAFT BARRICADE EVAL  
HIGH CYCLE TESTER DEV SUPPORT  
HELICOPTER HAULDOWN, SECURING AND TRAVERSING DEV AND EVAL  
STORED ENERGY ROTARY CATAPULT DEV SUPPORT

#### ...FUNCTIONS/EQUIPMENT/CAPABILITIES

ACFT LAUNCHING FACILITIES INCLUDE TC13-0 AND TC13-1 SHIPBOARD CATAPULTS WITH MK7-0, MK4-0 AND PORTABLE JET-BLAST DEFLECTORS. ACFT RECOVERY FACILITIES INCLUDE MK14, MK7-3, MK7-1 SHIPBOARD AND E-2R AND BAK-12 SHORE-BASED ARRESTING GEAR AT RUNWAY TEST SITES. SIMILAR GEAR INCLUDING MK7-2 SHIPBOARD AND M-21 MAR CORPS FIELD GEAR ARE LOCATED AT 5 INDEPENDENT TRACK SITES FOR TESTING WITH DEADLOADS. TEST FACILITIES FOR HELICOPTER AND VSTOL LAUNCH AND RECOVERY SUPPORT EQUIP INCLUDE A VISUAL LANDING AIDS LAB, ELEVATED FIXED PLATFORM, UNIVERSAL LIGHTING PAD AND MAR CORPS VSTOL FWD OPER BASE. THE TEST DATA ACQUISITION AND ANALYSIS SYSTEM CONSISTS OF 6 FIXED AND 5 MOBILE HIGH-SPEED DATA RECORDING SITES, PHOTO AND VIDEO INSTRUMENTATION, DIGITAL AND ANALOG COMPUTER FACILITIES. MACHINE SHOPS, ELECTRONICS REPAIR, AND HYDRAULIC TEST STAND FACILITIES PROVIDE SUPPORT

INSTALLATION: ARCTIC RESEARCH LABORATORY

BARROW AK

C.O. LTCDR R.H. SCHAUS

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RDT&E	6.756	6.763
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	1.588	1.351
TOTAL ANNUAL LAB	8.344	8.114
TOTAL INHOUSE	0.039	0.055
TOTAL INHOUSE RDT&E	0.000	0.000
ANNUAL OPERATING COST	4.776	4.963

PERSONNEL	PERSONNEL DATA (END OF FY 1976)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	2	0	1	1
CIVILIAN	0	0	0	0
TOTAL	2	0	1	1

ACRES	SPACE AND PROPERTY			COST (MILLION \$)		
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
4973	40.800	5.800	209.400	256.000	30.587	19.413

...MISSION

SUPPORTS A COMPREHENSIVE BASIC RESEARCH PROGRAM IN THE PHYSICAL, BIOLOGICAL AND ENVIRONMENTAL SCIENCES RELATED TO THE ICE-COVERED ARCTIC OCEAN, ADJACENT SEAS AND COAST LINES. SUPPORT ENGINEERING DISCIPLINES WITH APPLICATIONS IN TUNDRA AND PERMAFROST AREAS.

...CURRENT IMPORTANT PROGRAMS

RESEARCH IN ARCTIC NAVIGATION AND ICE LANDING/TAKE-OFF TECHNIQUES.  
RESEARCH ON AIR-SEA INTERFACE PROBLEMS.  
PLAN AND PREPARE FOR THE NANSEN DRIFT PROJECT.  
CONSTRUCT AN OCEANOGRAPHIC ATLAS OF THE BERING SEA.  
RESEARCH ON THE VELOCITY, DENSITY, TURBULENCE BENEATH FLAT SEA ICE.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

PROVIDES FACILITIES MAINTENANCE, UTILITIES GENERATION, MOTOR VEHICLE OPERATION AND MAINT, FIRE PROTECTION, SECURITY, JANITORIAL SERVICES, COMMUNICATIONS, AIRPORT OPERATION, MEDICAL SUPPORT, FOOD SERVICE, LAUNDRY, RECREATION AND RESALE ACTIVITIES.



INSTALLATION: BIOMEDICAL RESEARCH LABORATORY

OAKLAND CA

C.O. CAPT J. F. PRIGNOW

TECH.DIR. DR N.A. VEDROS

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RDT&E	2.188	2.035
TOTAL PROCUREMENT	0.000	0.000
TOTAL CGM	0.170	0.000
TOTAL OTHER	0.604	0.524
TOTAL ANNUAL LAB	2.962	2.559
TOTAL INHOUSE	0.596	0.672
TOTAL INHOUSE RDT&E	0.330	0.404
ANNUAL OPERATING COST	0.279	0.313

PERSONNEL	PERSONNEL DATA (END OF FY 1976)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	18	5	8	10
CIVILIAN	6	1	1	5
TOTAL	24	6	9	15

ACRES	SPACE AND PROPERTY (THOUSANDS OF SQUARE FEET)			COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
5	64.700	8.731	45.373	118.804	0.100	3.000

#### ...MISSION

CONDUCTS RESEARCH IN MICROBIOLOGY AIMED AT THE PREVENTION AND CONTROL OF DISEASES OF NAVAL PERSONNEL UNDER ISOBARIC, HYPERBARIC AND HYPOBARIC CONDITIONS AS WELL AS NORMAL AND UNUSUAL BREATHING MIXTURES. ALSO CONDUCTS RESEARCHS ON POLLUTION CONTROL AND ABATEMENT.

#### ...CURRENT IMPORTANT PROGRAMS

WORK ON SURVIVAL OF ENTEROPATHOGENS IN SEA WATER  
DETERMINE DISEASES OF MARINE MAMMALS OF IMPORTANCE TO THE NAVY  
DEVELOP BIOINDICATOR ORGANISMS THAT CAN SERVE AS POLLUTION INDICATORS  
USE OF MICROORGANISMS FOR BIODEGRADATION OF POLLUTANTS IN SEAWATER  
STUDY OF SKIN TEST FOR MENINGITIS

#### ...FUNCTIONS/EQUIPMENT/CAPABILITIES

EQUIPMENT INCLUDES MINIATURE DEEP FREEZE AND MINIATURE FIELD INCUBATORS FOR VIRUS ISOLATION, ROTATING DRUM USED TO INVESTIGATE EFFECT OF LIGHT ON AEROSOLIZED MICROORGANISMS AND PHOTOCHEMICAL REACTIONS, A HYPERBARIC TEST FACILITY, MICROAEROFLUOREMETER USED TO TRACK AEROSOL CLOUDS AND CLASS IV CONTAINMENT FACILITIES FOR HANDLING EXTREMELY PATHOGENIC VIRUSES AND BACTERIA. THE RESEARCH EQUIPMENT IS CONTINUOUSLY BEING MODIFIED AND EXPANDED IN ORDER TO MAINTAIN A LAB THAT IS RESPONSIVE TO THE TOTAL BIOLOGICAL NEEDS OF THE NAVY.

INSTALLATION: BLOOD RESEARCH LABORATORY

CHELSEA MS

C.O. CAPT CESARE R. VALERI

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RDT&E	0.818	0.935
TOTAL PROCUREMENT	0.818	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	0.212	0.220
TOTAL ANNUAL LAB	1.848	1.155
TOTAL INHOUSE	1.848	1.155
TOTAL INHOUSE RDT&E	0.818	0.935
ANNUAL OPERATING COST	0.200	0.200

PERSONNEL	PERSONNEL DATA (END OF FY 1976)				NON-PROF
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF		
MILITARY	17	3	5		12
CIVILIAN	12	0	3		9
TOTAL	29	3	8		21

ACRES	SPACE AND PROPERTY			COST (MILLION \$)		
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
1	12.880	2.760	8.560	24.200	0.500	0.715

...MISSION  
CONDUCT RESEARCH AND DEVELOP METHODS FOR LONG-TERM PRESERVATION OF BLOOD AND BLOOD PRODUCTS AND EVALUATION OF USEFULNESS IN OPERATIONAL AREAS ON LAND, AT SEA AND IN HOSPITALS.

...CURRENT IMPORTANT PROGRAMS  
WHITE CELL- AND PLATELET-POOR RED CELLS FOR THERAPEUTIC TRANSFUSION.  
EVALUATE METHODS FOR REJUVENATING UNDATED AND DATED RED CELLS.  
EVALUATE METHODS FOR PRESERVING PLATELETS, WHITE CELLS, AND STEM CELLS.  
CLINICAL EVALUATION OF FROZEN RED CELLS AND PLATELETS  
EVALUATE NEW METHODS FOR COLLECTING WHITE CELLS, PLATELETS & STEM CELLS

...FUNCTIONS/EQUIPMENT/CAPABILITIES  
STORAGE CAPABILITY FOR 6500 UNITS OF FROZEN BLOOD.  
LIQUID AND FREEZE PRESERVATION EQUIPMENT FOR RED CELLS, WHITE CELLS, PLATELETS, PLASMA PROTEIN, AND STEM CELLS.  
EQUIPMENT TO BIOLOGICALLY EVALUATE THE VIABILITY AND FUNCTION OF RED CELLS.  
EQUIPMENT TO BIOLOGICALLY EVALUATE THE VIABILITY AND FUNCTION OF STEM CELLS AND WHITE CELLS.  
EQUIPMENT TO BIOLOGICALLY EVALUATE THE VIABILITY AND FUNCTION OF PLATELETS.

INSTALLATION: CIVIL ENGINEERING LABORATORY

PORT HUENEME CA

C.O. CAPT N.W. PETERSEN

TECH. DIR. MR WM F. BURKAPT

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RDT&E	11.571	14.584
TOTAL PROCUREMENT	0.886	0.740
TOTAL O&M	1.181	1.289
TOTAL OTHER	0.674	0.750
TOTAL ANNUAL LAB	14.312	17.363
TOTAL INHOUSE	9.536	11.321
TOTAL INHOUSE RDT&E	7.261	9.083
ANNUAL OPERATING COST	2.388	2.779

PERSONNEL	PERSONNEL DATA (END OF FY 1976)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	15	1	9	6
CIVILIAN	300	30	166	134
TOTAL	315	31	175	140

ACRES	SPACE AND PROPERTY SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
22	120.352	23.977	51.543	195.872	2.055	2.780

#### ...MISSION

MISSION OF THE LABORATORY IS TO BE THE PRINCIPLE NAVY RDT&E CENTER FOR SHORE AND SEAFLOOR FACILITIES AND THE SUPPORT OF NAVY AND MARINE CORPS CONSTRUCTION FORCES

#### ...CURRENT IMPORTANT PROGRAMS

NAVY SHORE FACILITIES SUPPORT  
NAVY OCEAN FACILITY ENGINEERING  
NAVY & MARINE CORPS ADVANCE MOBILITY PROGRAM  
ENERGY AND ENVIRONMENTAL PROTECTION TECHNOLOGY  
CONTAINER OFF LOADING TRANSFER SYSTEM

#### ...FUNCTIONS/EQUIPMENT/CAPABILITIES

PRESSURE VESSEL FACILITY WITH 72 INCH 10 BY 10 FT DEEP PRESSURE VESSEL SUSTAINING PRESSURES UP TO 5500 PSI. DIVING LOCKER AND EQUIPMENT FOR 10 DIVERS. SEAFLOOR SOILS, MATERIALS, SOLID STATE METALURGICAL, PHOTOELASTIC, SNOW AND ICE LABORATORIES, WARPING TUG, CORER FOR TAKING SAMPLE AT WATER DEPTHS TO 6000 FT., INSTRU TESTING EQUIPMENT FOR DEEP OCEAN INCLUDING A NAME SHEAR DEVICE CONE PENETOMETER. 10 FT. CORER PLATE BEARING TEST DEVICE AND FOUNDATION MONITOR. PHOTOGRAPHIC FACILITY, ENVIRONMENTAL PROTECTION MONITORING CAPABILITY. CDC 8090 COMPUTER/TERMINAL WITH A HIGH SPEED READER AND LINE PRINTER, DIGITAL MAG TAPE T/O ANALOG TAPE. ADC AND DAC CONVERSION AND A PEN PLOTTER AND TIE WITH CDC-6600.

INSTALLATION: CLOTHING AND TEXTILE RESEARCH UNIT

NATICK MS

C.O. CDR R.A.J. RANIERI

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RDT&E	0.691	0.695
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.803	0.834
TOTAL OTHER	0.024	0.254
TOTAL ANNUAL LAB	1.518	1.783
TOTAL INHOUSE	1.341	1.384
TOTAL INHOUSE RDT&E	0.691	0.695
ANNUAL OPERATING COST	0.199	0.170

PERSONNEL	PERSONNEL DATA (END OF FY 1976)				NON-PROF
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF		
MILITARY	1	0	1	0	
CIVILIAN	60	1	33	27	
TOTAL	61	1	34	27	

ACRES	SPACE AND PROPERTY (THOUSANDS OF SQUARE FEET)			COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
2	10.000	7.000	3.000	20.000	0.400	0.767

#### ...MISSION

CONDUCT RESEARCH, DEVELOPMENT, TEST, AND EVALUATION AND GIVE ENGINEERING SUPPORT IN CLOTHING, TEXTILES, AND RELATED FIELDS ASSOCIATED WITH SERVICE CLOTHING AND ENVIRONMENTAL AND SPECIAL PROTECTIVE CLOTHING

#### ...CURRENT IMPORTANT PROGRAMS

SHIPBOARD DAMAGE CONTROL CLOTHING  
LIFE SUPPORT SYSTEMS PROTECTIVE CLOTHING  
WET WEATHER CLOTHING  
SAFETY FOOTWEAR  
THERMAL TRANSMISSION APPARATUS DESIGN

#### ...FUNCTIONS/EQUIPMENT/CAPABILITIES

##### MAJOR FUNCTIONS--

CONDUCT RDT&E IN TEXTILE MATERIALS, LEATHER, PLASTICS, AND RUBBER  
DEVELOP NAVY CLOTHING, ACCESSORIES, AND RELATED ITEMS  
CONDUCT STUDIES IN ENVIRONMENTAL SCIENCES AND LIFE SUPPORT SYSTEMS  
PREPARE SPECIFICATIONS FOR CLOTHING, TEXTILES, FOOTWEAR AND RELATED ITEMS  
COORDINATE STANDARDIZATION IN CLOTHING  
PROVIDE TECHNICAL SUPPORT TO ALL DOD AGENCIES IN NAVY CLOTHING AREAS  
MAJOR EQUIPMENT AND FACILITIES--  
TEXTILE LABORATORIES  
COLD TEST CHAMBERS  
HYDRO-ENVIRONMENT SIMULATOR  
HIGH INTENSITY THERMAL TEST UNIT

INSTALLATION: COASTAL SYSTEMS LABORATORY

PANAMA CITY FL

C.O. CAPT JAMES V. JOLLIFF

TECH. DIR. MR. GERALD G. GOULD

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RDT&E	24.664	29.427
TOTAL PROCUREMENT	0.981	0.172
TOTAL O&M	3.754	3.492
TOTAL OTHER	2.828	2.657
TOTAL ANNUAL LAB	32.227	35.738
TOTAL INHOUSE	23.928	22.347
TOTAL INHOUSE RDT&E	17.340	17.052
ANNUAL OPERATING COST	7.114	7.828

PERSONNEL	PERSONNEL DATA (END OF FY 1976)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	115	1	13	102
CIVILIAN	631	23	286	345
TOTAL	746	24	299	447

ACRES	SPACE AND PROPERTY (THOUSANDS OF SQUARE FEET)			COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
682	299.133	35.198	307.423	641.754	29.871	13.214

#### ...MISSION

TO BE THE PRINCIPAL NAVY ACTIVITY FOR CONDUCTING PDCE IN SUPPORT OF NAVAL MISSIONS AND OPERATIONS THAT TAKE PLACE PRIMARILY IN THE COASTAL (CONTINENTAL SHELF) REGIONS.

#### ...CURRENT IMPORTANT PROGRAMS

INTEGRATED SWIMMER DIVER SYSTEMS INCLUDING SALVAGE  
MINE COUNTERMEASURES  
ACOUSTIC WARFARE SYSTEMS  
COASTAL WARFARE OPERATIONS  
COASTAL TECHNOLOGY

#### ...FUNCTIONS/EQUIPMENT/CAPABILITIES

OCEAN SIMULATION FAC. HYDROSPACE LAB. GAS ANALYSIS LAB. BIOENGINEERING & PHYSIOLOGY LAB. WET SUBMERSIBLE VEHICLE FAC. RECOMPRESSION CHAMBERS. HYDRODYNAMIC PRESSURE SIMULATOR. SWIMMER/DIVER R&D FAC. MAGNETIC TARGET DETECTION & CLASSIFICATION RANGE. MAGNETIC LAB. TWO OFFSHORE PLATFORMS WITH LIVING QUARTERS FOR 30 & 4 PEOPLE. ELECTRONIC TRACKING RANGE. MODEL TOWING BASIN. ENVIRONMENTAL MONITORING FAC. CALIBRATION & STANDARDS FAC. BURROUGHS B-5500 DIGITAL COMPUTER. SYSTEMS DEVELOPMENT & TEST FACILITY. ACOUSTIC TEST POOL. PORTABLE TRACKING. OPTICAL POSITIONING SYSTEM. COUNTERMEASURES EVALUATOR. TRANSDUCER LAB & CALIBRATION FAC. LTW FREQUENCY HYDROPHONE CALIBRATION FAC. HELIPORT COMPLEX WITH 3 RH53D & 2 UH1E HELOS, INDUSTRIAL SHOPS. PIER SPACE & BOATS TO INCLUDE RESEARCH VESSEL, ATHENA. MSO/443, USS FIDELITY.

INSTALLATION: DENTAL RESEARCH INSTITUTE,NTC

GREAT LAKES IL

C.O. CAPT M.R. WIRTHLIN

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976	1977
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	0.540	0.644
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	0.435	0.412
TOTAL ANNUAL LAB	0.975	1.056
TOTAL INHOUSE	0.975	1.056
TOTAL INHOUSE RDT&E	0.540	0.644
ANNUAL OPERATING COST	0.260	0.235

PERSONNEL	PERSONNEL DATA (END OF FY 1976)				NON-PROF
	AUTHORIZED	TOTAL	TOTAL	PROF	
	STRENGTH	PHDS	PROF		
MILITARY	25	9	11	14	
CIVILIAN	16	3	6	10	
TOTAL	41	12	17	24	

ACRES	SPACE AND PROPERTY			COST (MILLION \$)		
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
0	11.780	10.174	9.487	31.441	0.000	0.645

...MISSION

CONDUCT RESEARCH IN DENTAL PROBLEMS OF ORAL HEALTH IN NAVAL AND MARINE CORP PERSONNEL AND DELIVERY OF DENTAL CARE

...CURRENT IMPORTANT PROGRAMS

ORAL HEALTH OF NAVAL PERSONNEL  
EVALUATION OF NAVY PLAQUE CONTROL PROGRAM  
MICROORGANISMS IN INDUCED PERIODONTAL DISEASE  
EVALUATION OF IMPLANT MATERIALS  
WOUND HEALING OF SUPPORT TISSUES

...FUNCTIONS/EQUIPMENT/CAPABILITIES

ASSESS DENTAL HEALTH STATUS OF RECRUITS.IMPROVE DISEASE PREVENTION AND CARE PROCEDURES.INCREASE QUALITY AND QUANTITY OF DENTAL CARES.  
AMINO ACID ANALYZER,ATOMIC ABSORPTION UNIT,FLUORIDE ELECTRODES.  
SCINTILLATION COUNTER,8K MEMORY COMPUTER,GAS CHROMATOGRAPH UNIT.

INSTALLATION: ELECTRONICS LABORATORY CENTER

SAN DIEGO CA

C.O. CAPT R.R. GAVAZZI

TECH. DIR. DR. C.E. BERGMAN

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RDT&E	55.142	54.547
TOTAL PROCUREMENT	4.496	6.712
TOTAL O&M	13.434	12.418
TOTAL OTHER	7.215	3.884
TOTAL ANNUAL LAB	80.289	77.561
TOTAL INHOUSE	51.090	57.106
TOTAL INHOUSE RDT&E	34.945	39.302
ANNUAL OPERATING COST	17.816	18.179

PERSONNEL	PERSONNEL DATA (END CF FY 1976)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	84	3	30	54
CIVILIAN	1433	85	805	628
TOTAL	1517	88	835	682

ACRES	SPACE AND PROPERTY (THOUSANDS OF SQUARE FEET)			COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
1548	461.049	122.732	85.324	669.105	16.224	55.131

#### ...MISSION

MISSION AND FUNCTIONS ARE TO ESTABLISH AND MAINTAIN THE PRIMARY IN-HOUSE RDT&E CAPABILITY FOR NAVY AND MARINE CORPS ELECTRONIC SYSTEMS AND TECHNOLOGIES FOR COMMAND CONTROL AND COMMUNICATIONS, ELECTRONIC WARFARE, ELECTROMAGNETIC SURVEILLANCE, IDENTIFICATION, AND NAVIGATION.

#### ...CURRENT IMPORTANT PROGRAMS

COMMAND CONTROL AND COMMUNICATIONS SYSTEMS ARCHITECTURE AND ENGINEERING  
SATELLITE COMMUNICATIONS AND DIGITAL INFORMATION EXCHANGE SYSTEMS  
COMMAND AND COMMUNICATION SYSTEMS FOR FBH AND ATTACK SUBMARINES  
APPLICATIONS OF MICROPROCESSORS AND MODULAR ELECTRONICS TO NAVY SYSTEMS  
OPERATIONAL APPLICATIONS OF OPTICS, ELECTRO-OPTICS AND FIBER OPTICS

#### ...FUNCTIONS/EQUIPMENT/CAPABILITIES

FACILITIES INCLUDE MICROELECTRONICS LAB, ELECTRO-OPTICS R&D LAB, HUMAN FACTORS LAB, MICROWAVE AND MILLIMETER WAVE RESEARCH FACILITY, ADVANCED COMPUTER SCIENCE CENTER, SHIP ANTENNA MODEL RANGE, ENVIRONMENTAL TEST FACILITY, MATERIALS SCIENCE LAB, SECURE SYSTEMS TEST FACILITY, ADVANCED SYSTEMS DEVELOPMENT AND EVALUATION FACILITIES, AND FLEET OPERATIONAL ACCURACY CHECK SITES

# INSTALLATION: ENVIRONMENTAL PREDICTION RESEARCH FACILITY MONT RLY, CA.

C.O. CAPT PIERRE A. PETIT

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL ROT&E	2.302	2.250
TOTAL PROCUREMENT	0.055	0.000
TOTAL C&M	0.000	0.000
TOTAL OTHER	0.263	0.246
TOTAL ANNUAL LAB	2.620	2.496
TOTAL INHOUSE	1.477	1.351
TOTAL INHOUSE ROT&E	1.226	1.111
ANNUAL OPERATING COST	0.199	0.439

PERSONNEL	PERSONNEL DATA (END OF FY 1976)			
	AUTHORIZED STRENGTH	TOTAL PHOS	TOTAL PROF	NON- PROF
MILITARY	14	1	4	10
CIVILIAN	41	1	21	20
TOTAL	55	2	25	30

ACRES	SPACE AND PROPERTY			COST (MILLION \$)		
	SPAC. (THOUSANDS OF SQUARE FEET)	LAB	ADMIN	OTHER	TOTAL	REAL PROP
0	1.808	5.012	10.490	17.310	0.000	0.974

## ...MISSION

CONDUCT RESEARCH AND DEVELOPMENT DIRECTED TOWARDS PROVIDING OBJECTIVE LOCAL, REGIONAL, AND GLOBAL ENVIRONMENTAL ANALYSIS AND PREDICTION TECHNIQUES; AND PROVIDE PLANNING, MODELING, AND EVALUATION SERVICES FOR DETERMINING THE EFFECT OF ENVIRONMENTAL ELEMENTS ON NAVAL WEAPON SYSTEMS

## ...CURRENT IMPORTANT PROGRAMS

LOCAL REGIONAL AND GLOBAL ENVIRONMENTAL ANALYSIS AND PREDICTION TECH. TECHNIQUES AND PROGRAMS FOR RECEIPT AND UTILIZATION OF SATELLITE DATA TECHNIQUES AND EQUIPMENT FOR INTERPRETATION AND DISPLAY OF ENVIRON. DATA MODEL ENVIRONMENTAL EFFECTS ON NAVAL WEAPON SYSTEMS APPLICATION OF NEW ENVIRONMENTAL DEVELOPMENT, DISSEMINATE USER AIDS

## ...FUNCTIONS/EQUIPMENT/CAPABILITIES

CDC 3100 COMPUTER AND PERIPHERAL EQUIPMENT  
CDC 200 USER TERMINAL FOR ACCESS TO 7600 COMPUTER  
5 INTERACTIVE TERMINAL FOR ACCESS TO CDC 6500 COMPUTERS  
ACCESS TO CYBER 140/145 COMPUTER  
SATELLITE DATA PROCESSING SYSTEM SOFTWARE DEVELOPMENT OFFICE (SSDC)  
SEADS DISPLAY SYSTEM FOR ENVIRONMENTAL AND SATELLITE DATA  
IN-HOUSE DOCUMENTATION FACILITIES (MTST, PLATE MAKEP, OFF SET PRESS, ETC.)  
PHOTOGRAPHIC LABORATORY  
24000 VOLUME TECHNICAL LIBRARY OF ENVIRONMENTAL PUBLICATIONS  
IN-HOUSE GRAPHIC ARTS AND DRAFTING FACILITIES  
CALCOMP 265 PLOTTER  
SATELLITE AND SYNOPSIS METEOROLOGICAL DATA LABORATORIES



INSTALLATION: EXPLOSIVE ORDNANCE DISPOSAL FACILITY

INDIAN HEAD MD

C.O. CDR W.S. CADOW

TECH. DIR. MR. LIONEL A. DICKENSON

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL ROT&E	3.540	4.645
TOTAL PROCUREMENT	0.465	0.819
TOTAL O&M	2.414	2.745
TOTAL OTHER	2.348	0.098
TOTAL ANNUAL LAB	8.767	8.307
TOTAL INHOUSE	5.850	4.200
TOTAL INHOUSE ROT&E	1.655	1.766
ANNUAL OPERATING COST	2.395	2.884

PERSONNEL	PERSONNEL DATA (END OF FY 1976)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	57	0	36	21
CIVILIAN	168	3	41	127
TOTAL	225	3	77	148

ACRES	SPACE AND PROPERTY			COST (MILLION \$)		
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
1084	50.400	23.397	26.416	100.213	3.780	2.307

#### ...MISSION

CONDUCT RESEARCH, DEVELOPMENT, TEST AND EVALUATION CONCERNING BOTH THE DISPOSAL AND RENDER-SAFE PROCEDURES FOR CONVENTIONAL AND SPECIAL WEAPONS, GUIDED MISSILES, UNDERWATER WEAPONS, EXPLOSIVES, BIO. AND CHEM MUNITIONS, BOTH U.S. AND FOREIGN PLUS THE REQUIRED TOOLS AND EQUIPMENT.

#### ...CURRENT IMPORTANT PROGRAMS

RANGE CLEARANCE AND DISPOSAL TECHNIQUES  
REMOTE CASE ENTRY SYSTEMS  
IMPROVISED EXPLOSIVE DEVICE COUNTERMEASURES  
EXPLOSIVE CONTAINMENT STUDY  
OD DIVER BREATHING SYSTEM

#### ...FUNCTIONS/EQUIPMENT/CAPABILITIES

DEVELOP EXPLOSIVE ORDNANCE DISPOSAL EOD PROCEDURE, PREPARE AND PUBLISH EOD PUBLICATIONS FOR JOINT-SERVICE USE. CONDUCT EXP. AND ADV. DEVELOPMENT LEADING TO SPECIALIZED TOOLS AND EQUIP. NEEDED TO LOCATE, IDENTIFY RECOVER, RENDER-SAFE AND DISPOSE OF ALL TYPES OF EXPLOSIVE ORDNANCE. PREPARE AND MAINTAIN DOCUMENTATION FOR EOD TOOLS AND EQUIP. CONDUCT FIRST ARTICLE INSPECTION ON EOD TOOLS BEING PROCURED FOR ALL SERVICES CONDUCT IN-SERVICE ENGINEERING FUNCTIONS FOR EOD AND SWIMMER WEAPONS SYSTEM TOOLS. CONDUCT INITIAL EVALUATION OF FOREIGN EXPLOSIVE ORDNANCE MAINTAIN, STOCK AND ISSUE EOD PUBLICATIONS FOR JOINT-SERVICE USE. CAPABILITY OF TESTING EOD TOOLS TO A DEPTH OF 400 FT IN A DIVING CHAMBER

INSTALLATION: HEALTH RESEARCH CENTER

SAN DIEGO CA

C.O. CAPT E.F. COIL

SCI. DIR. DR. W. L. WILKINS

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RDT&E	2.057	2.353
TOTAL PROCUREMENT	0.000	0.000
TOTAL C&M	0.000	0.000
TOTAL OTHER	0.571	0.520
TOTAL ANNUAL LAB	2.628	2.873
TOTAL INHOUSE	2.628	2.873
TOTAL INHOUSE RDT&E	2.057	2.353
ANNUAL OPERATING COST	0.410	0.400

PERSONNEL	PERSONNEL DATA (END OF FY 1976)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	32	10	13	19
CIVILIAN	73	11	28	45
TOTAL	105	21	41	64

ACRES	SPACE AND PROPERTY			COST (MILLION \$)		
	SPACE (THOUSANDS OF SQUARE FEET)	LAB	ADMIN	OTHER	TOTAL REAL PROP	EQUIP
1	11.177	4.500	0.000	15.677	1.880	0.267

#### ...MISSION

CONDUCT RSCH AND DEVELOPMENT ON MEDICAL AND PSYCHOLOGICAL ASPECTS OF HLTH AND PERFORMANCE OF NAVAL SERVICE PERSONNEL AND TO PERFORM SUCH OTHER FUNCTIONS OR TASKS AS MAY BE DIRECTED BY CHIEF BUMED

#### ...CURRENT IMPORTANT PROGRAMS

EFFECTS OF BIORHYTHMS ON HUMAN PERFORMANCE  
 PSYCHOBIOCHEMICAL ASSAYS STRESS TOLERANCE AMONG NAVAL SERVICE PERSONNEL  
 EFFECTS ORGANIZATIONAL STRESS HEALTH AND PERSONNEL EFFECTIVENESS  
 EFFECTS SHIPBOARD ENVIRONMENTAL DESIGN AND HABITABILITY DURING DEPLOY  
 FAMILY HEALTH DYNAMICS OF ADJUSTMENT TO SEPARATION

#### ...FUNCTIONS/EQUIPMENT/CAPABILITIES

PSYCHOPHYSIO LAB INCLUDING STUDY LOSS OF SLEEP, ABNORMAL WORK-REST CYCL  
 BIOCHEMICAL CORRELATES OF STRESS IN HUMAN OPERATORS  
 ON-LINE ELECTROPHYSIOLOGICAL RECORDING  
 MONITOR AUTONOMIC, OTHER BIOFEEDBACK RESPONSES FOR CLINICAL/FIELD POPS

INSTALLATION: MEDICAL FIELD RESEARCH LABORATORY

CAMP LEJEUNE NC

C.O. CAPT EUGENE J. CLARK, JR.

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RDT&E	0.800	0.000
TOTAL PROCUREMENT	0.020	0.000
TOTAL CGM	0.000	0.000
TOTAL OTHER	0.357	0.000
TOTAL ANNUAL LAB	1.177	0.000
TOTAL INHOUSE	1.147	0.000
TOTAL INHOUSE RDT&E	0.785	0.000
ANNUAL OPERATING COST	0.280	0.000

PERSONNEL	PERSONNEL DATA (END OF FY 1976)			
	AUTHORIZED STRENGTH	TOTAL PHOS	TOTAL PROF	NON- PROF
MILITARY	20	2	3	17
CIVILIAN	30	1	4	26
TOTAL	50	3	7	43

ACRES	SPACE AND PROPERTY			COST (MILLION \$)		
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
0	LAB	ADMIN	OTHER	57.852	0.000	0.466
	29.816	6.655	19.381			

#### ...MISSION

CONDUCT RESEARCH, DEVELOPMENT AND TESTING IN THE MEDICAL, DENTAL & ALLIED SCIENCES WITH PARTICULAR EMPHASIS ON PROBLEMS OF FIELD & AMPHIBIOUS MEDICINE

#### ...CURRENT IMPORTANT PROGRAMS

TROOP HEAT ACCLIMATIZATION  
DIV-L & EVAL FIELD WATER PURIFICATION SYSTEMS  
VECTOR CONTROL METHODS, EQUIPMENT & SUPPLIES  
TEST & EVAL MED SUCTION PUMP & OXYGEN SYSTEMS  
DEV MARINE CORPS ENVIRONMENTALLY CONTROLLED MEDICAL SYSTEM (MCEMS)

#### ...FUNCTIONS/EQUIPMENT/CAPABILITIES

CONDUCT RES IN PROBLEMS OF FLDG AMPHIB MED. DEV, TEST & EVAL MED EQUIP & SUPPLIES, & CLOTHING & EQUIPMENT FOR USMC PERSONNEL USE & PROTECTION;  
PRIMARY CAPABILITIES IN APPL RES, SPECIFICALLY IN AREAS OF EPIDEMIOLOG, PHYSIOLOG, STRESS PHYSIOLOG, ENTOMOLOG, ENVIRONMENTAL, FLD MED EQUIP, BIOCHEM, ANIMAL INVESTIGATIONS. MAJOR EQUIP - BALLISTIC RANGE, HIGH-SPEED BECKMAN CAMERA, MATERIALS LAMINATING PRESS & SEALERS, SEWING EQUIPMENT, 2-MAN RESP DISAPL ENVIRONMENTAL CHAMBER, OXYGEN ANALYZER, UNRESTRICTED PHOTO CAPABILITY, PHOTO MICROSCOPE, CRYOSTAT, GAS ANALYZER BLOOD, MICROSCOPE PHASE-CONTRAST, RADIO WITH RECHARGER.

INSTALLATION: MEDICAL RESEARCH INSTITUTE

BETHESDA MD

C.O. CAPT KENNETH W. SELL

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RDT&E	10.035	11.678
TOTAL PROCUREMENT	0.000	0.000
TOTAL C&M	0.000	0.000
TOTAL OTHER	3.636	2.720
TOTAL ANNUAL LAB	12.721	14.398
TOTAL INHOUSE	12.721	14.398
TOTAL INHOUSE RDT&E	10.035	11.678
ANNUAL OPERATING COST	3.630	3.630

PERSONNEL	PERSONNEL DATA (END OF FY 1976)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	221	62	221	0
CIVILIAN	210	45	92	118
TOTAL	431	107	313	119

ACRES	SPACE AND PROPERTY			COST (MILLION \$)		
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
4	133.495	12.945	38.547	184.987	4.122	6.540

...MISSION  
CONDUCT BASIC & APPLIED RESEARCH &  
DEVELOPMENT CONCERNED WITH THE HEALTH  
SAFETY & EFFICIENCY OF NAVAL  
PERSONNEL

...CURRENT IMPORTANT PROGRAMS  
TISSUE TYPING ORGAN TRANSPLANTS & IMMUNOSUPPRESSION IN RESTORATIVE SURG  
VACCINE DEV FOR CONTRL OF MALARIA & SCHISTOSOMIASTS  
HEAT & COLD STRESS IN HYPERBARIC & HIGH HUMIDITY ENVIRONMENT  
PHYSIOLOGICAL CONDITIONS ASSOC WITH HYPERBARIC ENVIRONMENT  
MECHANISMS OF ORAL PLAQUE DISEASE & TREATMENT OF ORAL DISEASE & TRAUMA

...FUNCTIONS/EQUIPMENT/CAPABILITIES  
BASIC & DEVELOPMENTAL RESEARCH IN THE BIOPHYSICAL AND BIOMEDICAL  
DISCIPLINES AFFECTING HUMAN HEALTH SAFETY & PERFORMANCE INCLUDING  
HUMAN ENVIRONMENTAL STRESS. FACILITIES INCLUDING  
ENVIRONMENTAL HEALTH EFFECTS LABORATORY,  
TRANSMISSION & SCANNING ELECTRON MICROSCOPE.  
TISSUE PRESERVATION & TRANSPLANTATION CAPABILITIES.  
RESEARCH BIOCHEMISTRY.  
EXPERIMENTAL ANIMAL FACILITIES & ANIMAL HOUSE.

INSTALLATION: MEDICAL RESEARCH UNIT NO. 2

TAIPEI TAIWAN

C.O. CAPT P.E.D. VANPEENEN

TECH DIR DR JOHN CROSS

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + FST)
TOTAL RDT&E	1.892	1.874
TOTAL PROCUREMENT	0.000	0.000
TOTAL CAM	0.000	0.000
TOTAL OTHER	0.659	0.700
TOTAL ANNUAL LAB	2.551	2.574
TOTAL INHOUSE	2.551	2.574
TOTAL INHOUSE RDT&E	1.892	1.874
ANNUAL OPERATING COST	0.505	0.612

PERSONNEL	PERSONNEL DATA (END OF FY 1976)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	32	8	20	12
CIVILIAN	4	1	3	1
TOTAL	36	9	23	13

ACRES	SPACE AND PROPERTY			COST (MILLION \$)		
	SPACE (THOUSANDS OF SQUARE FEET)	LAB	ADMIN	OTHER	TOTAL	REAL PROP
2	32.882	16.075	48.364	97.321	0.101	0.681

#### ...MISSION

CONDUCT RESEARCH AND DEVELOPMENT IN THE BIOMEDICAL SCIENCES, PROVIDE DATA ON DISEASES AND MEDICAL PROBLEMS OF MILITARY SIGNIFICANCE, RECOMMEND CONTROL MEASURES, AND PROVIDE TRAINING IN RESEARCH AND DEVELOPMENT TECHNIQUES

#### ...CURRENT IMPORTANT PROGRAMS

CONDUCT RESEARCH AND STUDY OF PREVENTION OF SCRUB TYPHUS  
STUDIES OF FILARIASIS IN THE PHILIPPINES AND INDONESIA  
SCHISTOSOMIASIS IN INDONESIA  
ETIOLOGY OF FEBRILE ILLNESSES IN INDONESIA

#### ...FUNCTIONS/EQUIPMENT/CAPABILITIES

CLINICAL STUDY OF DIAGNOSIS AND TREATMENT OF TROPICAL DISEASE AND EPIDEMIOLOGICAL STUDY OF INFECTIOUS DISEASES. COMPLETE RADIOISOTOPE EQUIPMENT AND COMPUTER CAPABILITY IN CLINICAL INVESTIGATION, MICROBIOLOGY, MEDICAL PHYSICS, MEDICAL ECOLOGY, BIOCHEMISTRY, PATHOLOGY, ANIMAL FACILITY

INSTALLATION: MEDICAL RESEARCH UNIT NO. 3

CAIRO, EGYPT

C.O. CAPT W.F. MINER

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RDT&E	1.100	1.265
TOTAL PROCUREMENT	0.000	0.000
TOTAL CGM	0.000	0.000
TOTAL OTHER	0.355	0.400
TOTAL ANNUAL LAB	1.455	1.665
TOTAL INHOUSE	1.455	1.665
TOTAL INHOUSE RDT&E	1.100	1.265
ANNUAL OPERATING COST	0.000	0.000

PERSONNEL	PERSONNEL DATA (END OF FY 1976)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	25	5	9	16
CIVILIAN	217	3	23	194
TOTAL	242	8	32	210

ACRES	SPACE AND PROPERTY SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
3	26.165	8.288	34.747	69.200	1.075	0.776

#### ...MISSION

TO CONDUCT RESEARCH AND DEVELOPMENT ON INFECTIOUS DISEASES OF MILITARY IMPORTANCE THAT ARE ENDEMIC OR EPIDEMIC IN ITS ASSIGNED GEOGRAPHICAL AREA; AND, TO PERFORM SUCH OTHER FUNCTIONS AS MAY BE DIRECTED BY THE CHIEF, BUREAU OF MEDICINE AND SURGERY.

#### ...CURRENT IMPORTANT PROGRAMS

MENINGITIS STUDY

PATHOPHYSIOLOGY OF SCHISTOSOMIASIS

ARTHROPOD VIRUS ISOLATIONS IN TICKS, MOSQUITOES, SANDFLIES

SALMONELLA EPIDEMIOLOGY AND TREATMENT

IMMUNOLOGY OF HUMAN SCHISTOSOMIASIS

#### ...FUNCTIONS/EQUIPMENT/CAPABILITIES

TECHNICIAN TISSUE PROCESSOR, HEWLETT PACKARD MODEL 9100 CALCULATOR, PICKER NUCLEAR MAGNASCANNER, PERKIN-ELMER ATOMIC ABSORPTION SPECTROPHOTOMETER, PERKIN-ELMER GAS CHROMATOGRAPH, COUNTER BLOOD CELL COUNTER, CARDIOGRAPH, AD FLUORESCENT MICROSCOPE GUILFORD MODEL 240 SPECTROPHOTOMETER, AMSCO AUTOCLAVES, 1 L BLOOD GAS APPARATUS, ANALYTIC SCANNER AND INTEGRATOR, UNICOM UV SPECTROPHOTOMETER, REVO FREEZERS, METTLER BALANCES, CLIMITIZER, INDUSTRIAL REFRIGERATORS, DUCON MICROSCOPE, COLONSCOPE, INCUBATOR CO2, EDGE CARD HOOD, AUTOMATIC PIPETTER, MICROTOME, PATIENTS WARD TO HOSPITALIZE SICK EGYPTIANS, PUBLIC WORKS FACILITY, WORKS MOST COMPLETE TICK COLLECTION AND MODERN LABORATORY TO STUDY DISEASES IN EGYPT.

INSTALLATION: MEDICAL RESEARCH UNIT NO. 5 (ETHIOPIA)

APC NEW YORK

C.O. CAPT CRAIG K WALLACE

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RDT&E	0.607	0.580
TOTAL PROCUREMENT	0.000	0.000
TOTAL C&M	0.000	0.000
TOTAL OTHER	0.359	0.322
TOTAL ANNUAL LAB	0.966	0.902
TOTAL INHOUSE	0.966	0.899
TOTAL INHOUSE RDT&E	0.607	0.577
ANNUAL OPERATING COST	0.100	0.133

PERSONNEL	PERSONNEL DATA (END OF FY 1976)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	19	3	4	15
CIVILIAN	58	3	6	52
TOTAL	77	6	10	67

ACRES	SPACE AND PROPERTY			COST (MILLION \$)		
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
0	5.096	1.587	0.645	7.328	0.000	0.239

...MISSION

TO CONDUCT RESEARCH AND DEVELOPMENT ON INFECTIOUS DISEASES OF MILITARY IMPORTANCE THAT ARE ENDEMIC IN SUB-SAHARAN AFRICA. RESEARCH IS TO INCLUDE ECOLOGY, ETIOLOGY, EPIDEMIOLOGY AND IMMUNOLOGY OF THE INFECTIOUS DISEASES AND METHODS OF DIAG TREATMENT, PREVENTION & CONTROL

...CURRENT IMPORTANT PROGRAMS

TREATMENT OF RELAPSING FEVER, TYPHUS FEVER, DIARRHEAL AND VENER DISEASES  
 DRUG SUSCEPTIBILITY OF MALARIA PARASITES & NATURALLY ACQUIRED IMMUNITY  
 NATURAL INFECTION STUDY OF YELLOW FEVER & OTHER ARBOVIRAL DISEASES  
 MAPPING OF GEOGRAPHIC DISTRIBUTION OF HUMAN DISEASE & ARTHROPODE VECTORS  
 INSECT VECTORIAL CAPACITIES BY VIRUS ISOLATION AND TRANSMISSION STUDIES

...FUNCTIONS/EQUIPMENT/CAPABILITIES

BASIC AND EXPERIMENTAL RESEARCH FACILITIES IN THE BIOMEDICAL SCIENCES  
 EFFECTING HUMAN HEALTH INCLUDING VIROLOGICAL, BACTERIOLOGICAL PARASITO-  
 LOGICAL, ENTOMOLOGICAL DISCIPLINES  
 EXPERIMENTAL ANIMAL FACILITIES AND ANIMAL COLONY HOUSES  
 FIELD FACILITY IN SOUTHWESTERN ETHIOPIA  
 FLEET OF FOUR WHEEL DRIVE VEHICLES.  
 LIQUID NITROGEN MANUFACTURING PLANT.

INSTALLATION: NATIONAL PARACHUTE TEST RANGE

FL CENTRO CA

C.O. CAPT R.S. CHOW, JR

T.CH. DIR. DR. H.C. FISH

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RDT&E	8.133	7.390
TOTAL PROCUREMENT	0.706	0.380
TOTAL O&M	0.942	1.025
TOTAL OTHER	6.568	7.646
TOTAL ANNUAL LAB	18.349	16.441
TOTAL INHOUSE	13.584	12.164
TOTAL INHOUSE RDT&E	7.433	6.470
ANNUAL OPERATING COST	6.427	6.446

PERSONNEL	PERSONNEL DATA (END OF FY 1976)				NON- PROF
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF		
MILITARY	262	5	36		226
CIVILIAN	290	0	32		258
TOTAL	552	5	68		484

ACRES	SPACE AND PROPERTY			COST (MILLION \$)		
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
484608	6.400	56.670	1142.407	1205.477	33.061	15.534

#### ...MISSION

CONDUCT RDT&E AND FOLLOW ON ENGINEERING OF AERODYNAMIC DECELERATORS, ASSOCIATED SYSTEMS, ASSEMBLIES AND EQUIPMENT; AND TO PROVIDE COMMON RANGE, TECHNICAL AND BASE SUPPORT FOR UNITS OF OPERATING FORCES OF THE NAVY AND OTHER DOD APPROVED USERS.

#### ...CURRENT IMPORTANT PROGRAMS

PHYSIOLOGICAL RESEARCH  
AIR CREW GLIDING ESCAPE SYSTEM  
TA7C ESCAPE SYSTEM SERVICE RELEASE TEST  
SEU 3A TAV 8A ESCAPE SYSTEM  
ADVANCED FIRE RESISTANT CANOPY

#### ...FUNCTIONS/EQUIPMENT/CAPABILITIES

DROP TEST RANGE LAND AND SALT WATER, SPACE POSITIONING PHOTO CCTV TELEMETRY INSTRUMENTATION, ADP FOR RANGE DATA, PARAMETERS SEA LEVEL TO 80KFT ENGINEERING SERVICES, EXPLORATORY DEVELOPMENT, ADVANCED AND BASIC DESIGN IN SERVICE ENGINEERING, MATERIALS TESTING LAB PHYSIOLOGICAL EVALUATION EQUIPMENT, PHOTO LAB, STILL AND MOTION, 16MM TO 70MM AND COLOR 5000 FPS AIRCRAFT, TRANSPORT DELIVERY LOW TO HIGH SPEED VEHICLE DELIVERY, AIR TO AIR PHOTO COVERAGE, EJECTION SEAT TEST BED, PERSONNEL DELIVERY INDUSTRIAL SHOPS, MACHINE SHOP, MODEL MAKING, VEHICLE AND PROTOTYPE PARACHUTE AND HARDWARE FABRICATION, CARPENTRY, WOODWORKING, PAINTING, METAL FABRICATION FOR WELD BEND HEAT TREAT AND MAGNAFLUX



INSTALLATION: ORDNANCE MISSILE TEST FACILITY

WHITE SANDS M.R., N.M

C.O. CDR M.A. PETERSON JR

CH. ENG. MR H.L. HENDON

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RD&E	3.508	3.021
TOTAL PROCUREMENT	0.000	0.121
TOTAL C&M	0.000	0.000
TOTAL OTHER	1.400	1.749
TOTAL ANNUAL LAB	4.908	4.891
TOTAL INHOUSE	3.675	2.308
TOTAL INHOUSE RD&E	2.354	1.295
ANNUAL OPERATING COST	1.055	0.433

PERSONNEL DATA (END OF FY 1976)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	93	0	33	60
CIVILIAN	65	0	2	63
TOTAL	158	0	35	123

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)	COST (MILLION \$)				
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
112	0.000	90.540	316.047	406.587	0.886	4.988

...MISSION

SUPPORT THE NAVY GUIDED MISSILE AND RESEARCH ROCKET PROGRAMS INCLUDING GROUND AND FLIGHT TESTING, ASSIST JOINT SERVICE LASER GUIDED WEAPONS COUNTERMEASURE TEST PROGRAM, PARTICIPATE IN THE OPERATION OF THE OOD INTEGRATED MISSILE TEST AT WHITE SANDS,

...CURRENT IMPORTANT PROGRAMS

STANDARD MISSILE 1 AND 2-AEGIS FLIGHT TESTING  
ASMD MISSILE FLIGHT 1 STING  
CRUISE MISSILE FLIGHT TESTING  
UPPER ATMOSPHERE RESEARCH ROCKET LAUNCHING  
STANDARD ARM MISSILE AIR-TO-GROUND FLIGHT TESTING

...FUNCTIONS/EQUIPMENT/CAPABILITIES

FLIGHT TEST TALOS, TERRIER, TARTAR, STANDARD, SAM GUIDED MISSILES  
FLIGHT TEST TALOS, STANDARD ANTI-RADIATION MISSILES  
LAUNCH AERONAUT 150, 170, 200, 350, ARIES, ASTORRE F.D, BLACK BRANT AND VARIOUS OTHER SOUNDING ROCKETS FOR UPPER ATMOSPHERIC STUDY  
CONDUCT NAVY AIR WEAPON TESTS  
LAUNCH VARIOUS ROCKETS IN SUPPORT OF NASA PROJECTS  
LAUNCH VARIOUS ROCKETS IN SUPPORT OF AIR FORCE PROJECTS  
CONDUCT VARIOUS DEVELOPMENT TESTS FOR GSM AND SAM PROJECTS  
PROVIDE DRONE SUPPORT  
ASSIST IN OPEVAL CRUISE MISSILE  
MAINTAIN TARGET RUM EQUIPMENT

INSTALLATION: PACIFIC MISSILE TEST CENTER

POINT MUGU CA

C.O. RADM D.M. ALTWEGG

TECH. DIR. MR T. PERRY

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RDT&E	120.239	104.000
TOTAL PROCUREMENT	29.518	29.256
TOTAL C&M	19.593	8.393
TOTAL OTHER	28.360	21.822
TOTAL ANNUAL LAB	197.710	163.471
TOTAL INHOUSE	138.408	117.745
TOTAL INHOUSE RDT&E	92.864	80.080
ANNUAL OPERATING COST	53.800	18.975

PERSONNEL	PERSONNEL DATA (END OF FY 1976)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	1004	5	277	727
CIVILIAN	4263	15	1211	3152
TOTAL	5367	20	1488	3879

ACRES	SPACE AND PROPERTY			COST (MILLION \$)		
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
27090	290.921	572.263	2462.024	3325.208	133.419	143.365

### ...MISSION

PERFORM DEVELOPMENT, TEST AND EVALUATION, DEVELOPMENT SUPPORT AND FOLLOW-ON ENGINEERING LOGISTIC AND TRAINING SUPPORT FOR NAVAL WEAPONS, WEAPONS-SYSTEMS AND RELATED DEVICES, PROVIDE MAJOR RANGE TECHNICAL AND BASE SUPPORT FOR FLEET USERS AND OTHER DEPARTMENT OF DEFENSE AND JOV AGENCIES

### ...CURRENT IMPORTANT PROGRAMS

AIR-LAUNCHED WEAPON PROGRAMS-SPARROW, SIDEWINDER, PHOENIX, TOMAHAWK  
CONDOR-WALLEYE, STANDARD ARM AND HARPOON  
SURFACED-LAUNCHED WEAPON PROGRAMS HARPOON, TOMAHAWK, AEGIS, SEASPARROW  
STRATEGIC WEAPONS TESTS OF MM3, POLARIS, TRIDENT  
FLEET AIR-AIR, AIR-SURFACE, SURFACE AND ANTISUBMARINE EXERCISES

### ...FUNCTIONS/EQUIPMENT/CAPABILITIES

UNDERWATER TRACKING RANGE 50 SQUARE MILE, 2-DIMENSIONAL 400-1000 FATHOMS  
AIR AND SURFACE TRACKING RANGE, 45000 SQUARE MILES. FPS-16, FPQ-10, FPQ-12,  
MPS-25 RADARS, THEODOLITES AND SINE-SEXTANTS. P, L, AND S BAND TELEMETRY,  
SYSTEMS. PROVIDE ENGINEERING MANAGEMENT AND SUPPORT FOR FW EQUIPMENT  
FACILITIES, VAST STATION, WEAPONS SIMULATION LAB, CLIMATIC CHAMBER, ANACHOIC  
CHAMBER, ECM LAB, MISSILE AND TARGET LAUNCH PLATFORMS AND FACILITIES.  
COMMAND, CONTROL, AND DESTRUCT FACILITIES. SHIP MOTION SIMULATOR. USNS  
WHEELING-TRACKING, TELEMETRY, COMMAND, CONTROL, AND DESTRUCT SHIP MISSILE  
IMPACT LOCATION SYSTEMS

INSTALLATION: PERSONNEL RESEARCH & DEVELOPMENT CENTER SAN DIEGO, CA

C.O. CAPT J.J. CLARKIN

TECH. DIR. DR. J.J. REGAN

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RDT&E	8.369	10.446
TOTAL PROCUREMENT	0.436	0.350
TOTAL O&M	1.579	1.655
TOTAL OTHER	1.073	0.904
TOTAL ANNUAL LAB	11.459	13.255
TOTAL INHOUSE	7.515	9.021
TOTAL INHOUSE RDT&E	5.232	6.737
ANNUAL OPERATING COST	1.804	1.900

PERSONNEL	PERSONNEL DATA (END OF FY 1976)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	27	1	21	6
CIVILIAN	270	67	196	74
TOTAL	297	68	217	80

ACRES	SPACE AND PROPERTY			COST (MILLION \$)		
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
1	49.300	4.900	0.000	54.200	0.302	1.490

#### ...MISSION

PRINCIPAL NAVY ACTIVITY FOR CONDUCTING HUMAN RESOURCES RDT&E IN THE AREAS OF MANPOWER PERSONNEL EDUCATION AND TRAINING AND TO SERVE AS THE COORD ACTIVITY FOR ALL SUCH RDT&E FOR NAVY. PROVIDE SUPPORT TO CNM ACTIVITIES TO AUGMENT HUMAN FACTORS EFFORTS IN DEVELOPMENT OF NEW SYSTEM

#### ...CURRENT IMPORTANT PROGRAMS

PERSONNEL ACQUISITION AND INITIAL ASSIGNMENT  
HUMAN PERFORMANCE IN NAVY SYSTEMS  
PERSONNEL EDUCATION AND TRAINING  
PERSONNEL MANAGEMENT  
FACTORS IN PERSONNEL EFFECTIVENESS

#### ...FUNCTIONS/EQUIPMENT/CAPABILITIES

GENERAL AUTOMATION 18/30 COMPUTER SYSTEM WITH REMOTE JOB ENTRY CAPABILITY TO OTHER COMPUTER CENTERS  
LABORATORY INSTRUMENT CONTROL SYSTEM.COMPUTER AUTOMATED TESTING AND TRAINING SYSTEM.ELEKTRONIC GRAPHIC TERMINALS INTERFACING WITH NAVAL UNDERSEAS CENTER UNIVAC 1100 MAXICOMPUTER.PLATO IV TERMINALS INTERFACING WITH COMPUTER AT U OF ILL

INSTALLATION: RESEARCH LABORATORY

WASHINGTON, D.C.

C.O. CAPT L.M. NOEL

DIR. OF RSCH. DR. ALAN BERMAN

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RDT&E	141.364	151.828
TOTAL PROCUREMENT	8.457	9.302
TOTAL O&M	19.711	21.682
TOTAL OTHER	11.619	13.049
TOTAL ANNUAL LAB	181.151	195.861
TOTAL INHOUSE	155.114	174.124
TOTAL INHOUSE RDT&E	115.327	130.091
ANNUAL OPERATING COST	45.290	48.695

PERSONNEL	PERSONNEL DATA (END OF FY 1976)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	133	0	34	99
CIVILIAN	3507	507	1524	1983
TOTAL	3640	507	1558	2082

ACRES	SPACE AND PROPERTY			COST (MILLION \$)		
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
699	2140.804	236.893	594.454	2972.151	82.745	77.969

#### ...MISSION

TO CONDUCT A BROADLY BASED MULTIDISCIPLINARY PROGRAM OF SCIENTIFIC RESEARCH AND ADVANCED TECHNOLOGICAL DEVELOPMENT DIRECTED TOWARD NEW AND IMPROVED MATERIALS, EQUIPMENT, TECHNIQUES, SYSTEMS, AND RELATED OPERATIONAL PROCEDURES FOR THE NAVY.

#### ...CURRENT IMPORTANT PROGRAMS

NAVSTAR GLOBAL POSITIONING SYSTEM  
EFFECTIVENESS OF NAVAL ELECTRONICS WARFARE SYSTEMS  
HIGH ENERGY LASER, GENERATION, PROPAGATION, AND EFFECTS PROGRAM  
ADVANCED ACOUSTIC ANTI-SUBMARINE WARFARE SURVEILLANCE PROGRAM  
SATELLITE PROGRAMS

#### ...FUNCTIONS/EQUIPMENT/CAPABILITIES

PRINCIPAL RESEARCH AND DEVELOPMENT LABORATORY OF THE NAVY. PRIMARY AREAS ARE MATERIALS SCIENCE AND TECHNOLOGY, SPACE SCIENCE AND TECHNOLOGY, RADAR, ELECTRONIC WARFARE, LASER TECHNOLOGY, OPTICS, OPTICAL WARFARE, ELECTRONIC DEVICES, PLASMA AND NUCLEAR PHYSICS, INTELLIGENCE SUPPORT, UNDERSEA SURVEILLANCE, OCEAN SCIENCE AND TECHNOLOGY. MAJOR FACILITIES INCLUDE ONE SHIP FOR ACOUSTIC ASM RESEARCH, OCEANOGRAPHY, AND DEEP OCEAN RESEARCH. MAJOR ACOUSTIC STANDARD AND CALIBRATION FACILITIES. HIGH LEVEL RADIATION LABORATORY. THREE NUCLEAR PARTICLE ACCELERATORS. DIVERS HIGH ENERGY LASERS. 200 KILOGAUSS HIGH FIELD MAGNET FACILITY. SPACE SIMULATION FACILITIES.

INSTALLATION: SHIP RESEARCH AND DEVELOPMENT CENTER

WASHINGTON, D.C.

C.O. CAPT M.C. DAVIS

TECH. DIR. DR. A. POWELL

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RDT&E	83.294	92.379
TOTAL PROCUREMENT	8.931	6.739
TOTAL C&M	15.381	18.746
TOTAL OTHER	7.733	7.116
TOTAL ANNUAL LAB	115.339	124.980
TOTAL INHOUSE	93.669	95.620
TOTAL INHOUSE RDT&E	63.660	67.934
ANNUAL OPERATING COST	29.430	31.789

PERSONNEL	PERSONNEL DATA (END OF FY 1976)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	70	1	17	53
CIVILIAN	2771	125	1221	1550
TOTAL	2841	126	1238	1603

ACRES	SPACE AND PROPERTY			COST (MILLION \$)		
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
322	368.522	142.814	1405.876	1987.212	71.138	44.766

#### ...MISSION

TO BE THE PRINCIPAL NAVY RDT&E CENTER FOR NAVAL VEHICLES, TO PROVIDE RDT&E SUPPORT TO THE U.S. MARITIME ADMINISTRATION AND THE MARITIME INDUSTRY.

#### ...CURRENT IMPORTANT PROGRAMS

ADVANCED SHIP AND AIRCRAFT R&D (HYDROFOILS, SMALL WATERPLANE AREA TWIN HULL SHIP, AMPHIBIOUS ASSAULT LANDING CRAFT, SURFACE EFFECT SHIPS, CIRCULATION CONTROL AIRCRAFT). HYDROMECHANICS, MATERIALS, STRUCTURES, PROPULSION & AUX MACHINERY FOR SHIPS, SUBS & BOATS. SURFACE SHIP & SUB SILENCING. COMPUTER-AIDED SHIP DESIGN & CONSTRUCTION. LOGISTICS.

#### ...FUNCTIONS/EQUIPMENT/CAPABILITIES

PLAN AND CONDUCT RDT&E AND PROVIDE SUPPORT OF THE OPERATING FORCES IN THE AREAS OF NAVAL ARCHITECTURE, HYDROMECHANICS, STRUCTURAL MECHANICS, AERODYNAMICS, COMPUTER ANALYSIS & MATHEMATICS, ACOUSTICS & VIBRATIONS, PROPULSION AND AUXILIARY MACHINERY, SHIP ELECTRICAL SYSTEMS, MATERIAL FOR SHIP STRUCTURES AND EQUIPMENT, SHIPBOARD POLLUTION CONTROL. FACILITIES INCLUDE: DEEP, SHALLOW, AND HIGH SPEED TOWING BASINS, MANEUVERING-SEAKEEPING AND ROTATING ARM TOWING BASINS, TRANSONIC AND SUBMERGENCE PRESSURE TANKS, ACOUSTIC DATA ANALYSIS CENTER, ANECHOIC FLOW FACILITY, LARGE SCALE STRUCTURAL RESEARCH FACILITY, MAGNETICS FACILITY, POLLUTION CONTROL LABORATORY, AND BALLAST BLOW FACILITY.

INSTALLATION: SUBMARINE MEDICAL RESEARCH LABORATORY

GROTON CT

C.O. CAPT R.L. SPHAR

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RD&E	1.653	1.924
TOTAL PROCUREMENT	0.000	0.000
TOTAL OEM	0.000	0.000
TOTAL OTHER	0.424	0.510
TOTAL ANNUAL LAB	2.077	2.434
TOTAL INHOUSE	2.077	2.434
TOTAL INHOUSE RD&E	1.653	1.924
ANNUAL OPERATING COST	0.303	0.320

PERSONNEL	PERSONNEL DATA (END OF FY 1976)			
	AUTHORIZED STRENGTH	TOTAL PROFS	TOTAL PROF	NON- PROF
MILITARY	32	6	8	24
CIVILIAN	60	11	29	31
TOTAL	92	17	37	55

ACRES	SPACE AND PROPERTY			COST (MILLION \$)		
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
1	23.325	6.441	13.118	42.984	1.071	1.505

### ...MISSION

TO CONDUCT BASIC AND APPLIED RESEARCH IN SUBMARINE AND DIVING MEDICINE, CLOSED ENVIRONMENTS IN AREAS OF PHYSIOLOGY, PSYCHOLOGY, VISION, AUDITION, HUMAN FACTORS, MIL APPLICATIONS, TO MEET NAVY REQUIREMENTS, FURNISH RESEARCH AND MEDICAL SUPPORT TO SUB AND DIVING SHORE AND FLEET COMD'S.

### ...CURRENT IMPORTANT PROGRAMS

1 LONGITUDINAL HEALTH STUDY OF SUBMARINERS AND DIVERS, 2 DYSBARIC OSTEO-NECROSIS IN NAVY DIVERS, 3 SATURATION-EXCURSION AIR DIVES TO SHALLOW DEPTHS, 4 AUDITORY AND VISUAL TESTS AND EVALUATION OF SUBMARINE AND DIVING PERSONNEL IN OPERATIONAL STRESS ENVIRONMENTS, 5 HUMAN FACTORS EVALUATION OF PERSONNEL IN SUBMARINE INFORMATION PROCESSING

### ...FUNCTIONS/EQUIPMENT/CAPABILITIES

HYPERBARIC CHAMBERS, HUMAN-150 PSI, ANIMAL-300 AND 1000PSI, ENVIRO. CONTROL CHAMBERS, LABORATORYS-PUL. FUNC., X-RAYS, CARDIOPUL, BIOCHEMISTRY, HISTO-PATH, VISION, HUMAN FACTORS, BIOENGINE, AUDITORY, ANECHOIC RMS, AUDIO TEST 30 THS, MICROBIOLOG - ISOLATION LAB CLIN, MEDEXAM SUITE, X-RAY COPY FAC., PERSONNEL ASSESS SEC, ANIMAL CARE-HOUSING FAC, SURGICAL SUITE, COMPUTR APPLIC FAC, TECH. LIBRARY, APPARATUS SHOP, PUBLICATIONS SEC, GRAPHIC ARTS-PHOTO SEC, EQUIPMENT DIVER COMM SYS, GAS MIXER, CLOD CIR TV SYS, DOPPLER SYS, ANALOG-DIGITAL COMPUTER SYS, RESP ANAL SYS, SPECTROPHOTMTR SONAR STACK SIN TEST SYS, SCINTILAT. CNTR, MULT-CH. MAG TAPE SYS, ATOMIC ABSORP SPECTROPHMTR, FLUIDIC CONTROL CONSOLE, AIR TON MONITORING SYSTEM GAS CHROMATOGRAPHS, EEG REC SYS, SPECTRUM ANAL, SPIROMETER PULMOTESTER TREADMILL, CARD PROCESSOR, TECHNICON AUTOMAT, UNDERWATER TV SYSTEMS

INSTALLATION: SURFACE WEAPONS CENTER

SILVER SPRING, MD

C.O. CAPT C.J. RORIE

TECH. DIR. MR. JAMES F. COLVARD

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RDT&E	174.938	156.255
TOTAL PROCUREMENT	33.302	28.405
TOTAL C&M	24.024	22.225
TOTAL OTHER	12.337	15.001
TOTAL ANNUAL LAB	244.601	221.886
TOTAL INHOUSE	124.532	128.411
TOTAL INHOUSE RDT&E	81.202	80.914
ANNUAL OPERATING COST	57.611	55.346

PERSONNEL	PERSONNEL DATA (END OF FY 1976)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	128	2	60	68
CIVILIAN	5132	251	2264	2868
TOTAL	5260	253	2324	2936

ACRES	SPACE AND PROPERTY			COST (MILLION \$)		
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
5380	897.833	259.161	1569.511	2726.505	90.663	66.292

### ...MISSION

TO BE THE PRINCIPAL NAVY RDT&E CENTER FOR SURFACE WARFARE WEAPONS SYSTEMS, ORDNANCE TECHNOLOGY, AND STRATEGIC SYSTEMS SUPPORT -

### ...CURRENT IMPORTANT PROGRAMS

TORPEDO MK48-1

CAPTOR DEVELOPMENT

HIGH ENERGY LASER RESEARCH AND DEVELOPMENT

GUIDANCE DATA FOR POLARIS/POSEIDON/ULMS/FBM SYSTEMS PROGRAM

5 IN GUIDED PROJECTILE

### ...FUNCTIONS/EQUIPMENT/CAPABILITIES

FACILITIES INCLUDE WIND TUNNELS TO MACH 20, BALLISTIC RANGES FOR FREE FLIGHT MODEL STUDIES, 1.75 MILLION GALLON CAPACITY HYDROBALLISTIC TANK, MAGNETIC STRUCTURE FACILITY TO STUDY MAGNETIC CHARACTERISTICS OF SHIPS, SUBMARINES, AND SATELLITES; WARFARE ANALYSIS CENTER, FBM DISC PACK PRODUCTION FACILITY, GUNNERY AND MISSILE RANGE COMPLEX, AND ELECTROMAGNETIC VULNERABILITY TEST FACILITY. CAPABILITIES FOR STRATEGIC SYSTEMS, NAVAL MINE SYSTEMS, MULTI MEDIA WEAPONS SYSTEMS, DIRECTED ENERGY SYSTEMS AND FUZE DEVELOPMENT, ORDNANCE TECHNOLOGY, ELECTROMAGNETIC WARFARE, MISSILE GUIDANCE; TACTICAL, STRATEGIC, AMPHIBIOUS AND MINE WARFARE ANALYSIS, SMALL CRAFT ARMAMENT, ANTITORPEDO WEAPONS SYSTEMS, WEAPONS SYSTEM-SAFETY, SWIMMER WEAPONS SYSTEMS, MATERIALS AND INSTRUMENTATION RESEARCH, AND MODEL FABRICATION.

INSTALLATION: UNDERSEA CENTER

SAN DIEGO CA

C.O. CAPT R.B. GILCHRIST

TECH. DIR. DR. H.L. GLOD

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RDT&E	69.764	85.453
TOTAL PROCUREMENT	8.393	6.088
TOTAL C&M	10.752	13.891
TOTAL OTHER	9.838	5.939
TOTAL ANNUAL LAB	98.747	111.371
TOTAL INHOUSE	57.857	66.475
TOTAL INHOUSE RDT&E	43.402	49.909
ANNUAL OPERATING COST	19.393	21.752

PERSONNEL	PERSONNEL DATA (END OF FY 1976)				NON-PROF
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	PROF	
MILITARY	280	2	22	258	
CIVILIAN	1596	122	798	798	
TOTAL	1876	124	820	1056	

ACRES	SPACE AND PROPERTY			COST (MILLION \$)		
	SPACE (THOUSANDS OF SQUARE FEET)	LAB	ADMIN	OTHER	TOTAL REAL PROP	EQUIP
37398	516.055	96.935	390.049	1003.039	50.018	49.679

### ...MISSION

MISSION OF THE CENTER IS TO BE THE PRINCIPAL NAVY RESEARCH , DEVELOPMENT, TEST AND EVALUATION CENTER FOR UNDERSEA SURVEILLANCE, ADVANCED SURFACE AND AIR LAUNCHED UNDERSEA WEAPONS SYSTEMS, AND DEEP OCEAN TECHNOLOGY.

### ...CURRENT IMPORTANT PROGRAMS

ADV U/S SURVEILLANCE INCL LG APERTURE & TOWED APRAYS, T&E OF MAJOR SURVL SYS. ADV SONAR TECHNIQS, FLEET SONAR SYS IMPROVEMT. ASW WEAPONS SYS DEV, EG ADV TORPEDO TECHNOL, SUB-LAUNCHED MISSILE TECHNOL, FIRE CONTROL SYS, ACOUS CIM, MARINE BIGSYS. USW OCEANOGR RSCH. OCEAN ENGRG & REMOTE U/S WORK SYS.

### ...FUNCTIONS/EQUIPMENT/CAPABILITIES

U/S SURVL. UNDERSEA/SURFACE WEAPONS & FIRE CONTROL SYS, LTWT TORPEDOES, HISPEED VEHICLE & HI RESOLUTION SONARS, UW ACOUSTIC WARFARE SYS, REMOTE CONTROL UW SYS, OCEAN TECHNOL & ENGRG, MARINE BIOSCI, MAR MAMMAL SYS, ACOUS PROPAGATION (PACIARC), PACFLT ASW SUPPT, ARC SUP SYS. RDT&E LABS SDIEGO, HAWAII, SEA TEST/ENGRG RANGES SAN CLEMENTE IS, MORRIS DAM, LBACH, CALIBRATION STA, ARC ARC FIELD STA, ALASKA, ARC SUB LAB & POLAR ICE SIMULATOR, MAR BIOSCI FAC, MAJOR SIM/REALTIME COMPUTER FAC FOR ASW SYS DEV, TRANSDUCER EVAL CTR ANECHOIC ALL FREQUENCIES, RSCH SHIPS & CRAFT, DAPAAN FAC FOR DEV-EVAL OF SIG PROC TECHNIQS, DEV/TEST FACS FOR LTWT AIRDRP TORPEDOES, UNMANNED REMOTE U/S WORK SYS EG CABLE-CONTROLLED UW RECOV-ERY VEHICLE, UW OBSERV PLATFORMS, VAR ANGLE LAUNCHER.



INSTALLATION: UNDERWATER RANGES DIRECTORATE

NEWPORT, R.I.

C.O. CAPT W.L. BONHANNAN

TECH. DIR. MR. C.S. SOLICZY

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RDT&E	15.378	16.426
TOTAL PROCUREMENT	0.333	0.298
TOTAL O&M	3.609	3.223
TOTAL OTHER	1.571	0.758
TOTAL ANNUAL LAB	20.891	20.705
TOTAL INHOUSE	5.059	5.630
TOTAL INHOUSE RDT&E	3.812	4.575
ANNUAL OPERATING COST	0.000	0.000

PERSONNEL	PERSONNEL DATA (END OF FY 1976)				NON-PROF
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF		
MILITARY	42	0	17		25
CIVILIAN	48	1	30		18
TOTAL	90	1	47		43

ACRES	SPACE AND PROPERTY (THOUSANDS OF SQUARE FEET)			COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
1042	67.000	11.173	266.044	344.217	23.575	1.175

#### ...MISSION

TO PROVIDE DEEP WATER DEV & OPRTNL T&E FCLTYS FOR UNDRWTR ACSTIC MESRMNT S, TSTNG, & CALBRNG SONRS. PROVIDE ACURAT UNDRWTR, SPFC, & IN-AIR TRCKNG DATA ON SHIPS, SUBS, AIRCRT, & WPN SYSTMS.

#### ...CURRENT IMPORTANT PROGRAMS

MK48 WEAPON SYSTEMS TRAINING CERTIFICATION PROGRAM  
SHIP SILENCING PROGRAM  
FLEET TRAINING/SUBROC, SUBEX, SHAREM  
AIRBORNE MINEX & TORPEX/RANGEX  
R&D TESTS/CAPTOR/MP SONAR/TOWED ARRAYS/LAMPS/BOQ S/DICASS

#### ...FUNCTIONS/EQUIPMENT/CAPABILITIES

HIGHLY ADVANCED & INSTRUMENTED ASW WEAPONS, SONAR & FORACS TEST MEASUREMENT RANGES IN SUPPORT OF NAVY ASW & UNDRSEA R&D PROGRAMS, & ASW FLEET ASSESSMENT & OPERATIONAL READINESS.

INSTALLATION: UNDERWATER SYSTEMS CENTER

NEWPORT, RI

C.O. CAPT W.L. BOHANNAN

TECH. DIR. DR. C. NICHOLAS PRYOR

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RDT&E	69.442	101.110
TOTAL PROCUREMENT	65.483	53.825
TOTAL O&M	36.071	53.492
TOTAL OTHER	6.112	11.447
TOTAL ANNUAL LAB	177.108	219.874
TOTAL INHOUSE	101.658	132.565
TOTAL INHOUSE RDT&E	49.739	62.553
ANNUAL OPERATING COST	25.470	29.144

PERSONNEL	PERSONNEL DATA (END OF FY 1976)				NON-PROF
	AUTHORIZED STRENGTH	TOTAL PHCS	TOTAL PROF		
MILITARY	104	1	27		77
CIVILIAN	3019	96	1592		1427
TOTAL	3123	97	1619		1504

ACRES	SPACE AND PROPERTY			COST (MILLION \$)		
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
314	LAB 842.244	ADMIN 107.528	OTHER 532.373	1482.150	35.202	39.285

#### ...MISSION

TO BE THE PRINCIPAL NAVY RDT&E CENTER FOR SUBMARINE WARFARE & SUBMARINE WEAPON SYSTEMS.

#### ...CURRENT IMPORTANT PROGRAMS

ADVNC'D TECHNGY IN U/W ACCUTCS, OCEAN ENGRNG, INFO PROCSNG, WEAPONRY DESGN, DEV & EVAL U/W COMBAT SUB SYSTEMS INCNG SURFC SHIP SONAR MODRNZTN RDT&E FOR OVERALL U/W COMBAT SYSTEMS (TRIDENT, 688, ETC)  
DESGN, DEV & EVAL OF U/W TARGET SYSTEMS & MOBILE/FIXD U/W TEST RANGES  
INTRODUCE TO FLEET & IN-SERVICE ENGINEERING OF MK 48

#### ...FUNCTIONS/EQUIPMENT/CAPABILITIES

PRIMARY IN-HSE R&D CAPABILITY FOR NAVY & MARINE CRP SYSTEMS, SUBSYSTEMS & TECHNLGYS FOR SONAR SYSTEMS (HULL-TOWD/SUB COMCTNS SYSTEMS INTEGRTN/SUB ANT-NA SYSTEMS/UWTR H-AP SYSTEMS/UWTR TARGET SYSTEMS/UWTR ACOUSTIC PROPGTN (LANT & MED)/UWTR RNGE TECHNLGY/REDINESS OF IN-SRVC SHIPBOARD UWTR SYSTEMS/ASW SUP, CINCLNT, TORPEDO TEST RNGES (FIXED/PORTBLE) SHLOW & DP WTR, ASW WEAPON FIRE CNTRL R&D FACILITY, ASW WEAPON LAUNCHNG DEVCE R&D FACLT, QLTY ENGRNG, VALTN & RELIABTY LAB, BERMUDA RSCH FACLT, TORPEDO PROPULSN TEST FACLT, ELECTROMAGTIC FACLT, SYSTEMS CRTIFCTN & INTGRTN FACLT, ACOUSTIC MSRMNT & XCDCR R&E FACLT, TORPEDO TEST RANGE, INSTRMNTN SHELTER, ACOUSTIC RNGE, AUTEC, AZORES FIXED ACOUSTIC RNGE.

INSTALLATION: WEAPONS CENTER

CHINA LAKE, CA

C.O. RADM R.G. FREEMAN, III

TECH. DIR. DR G.L. HOLLINGSWORTH

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RDT&E	125.055	159.902
TOTAL PROCUREMENT	40.902	35.981
TOTAL O&M	12.895	9.910
TOTAL OTHER	38.492	28.321
TOTAL ANNUAL LAB	217.344	234.114
TOTAL INHOUSE	125.047	147.958
TOTAL INHOUSE RDT&E	79.300	99.541
ANNUAL OPERATING COST	35.767	40.000

PERSONNEL DATA (END OF FY 1976)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	516	0	49	467
CIVILIAN	4366	138	1482	2884
TOTAL	4382	138	1531	3351

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)	COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL REAL PROP EQUIP
1093634	101.020	357.595	5735.192	6193.807 221.995 79.717

...MISSION

THE MISSION OF THE NAVAL WEAPONS CENTER IS TO BE THE PRINCIPAL NAVY RDT&E CENTER FOR AIR WARFARE SYSTEMS (EXCEPT ANTI-SURMARINE WARFARE SYSTEMS) AND MISSILE WEAPON SYSTEMS.

...CURRENT IMPORTANT PROGRAMS

HARPOON-MISSILE SUPPORT JC WARHEAD ETC.  
HARM-HIGH SPEED ANTI RADIATION MISSILE  
AIM-9L-GUIDED AIR LAUNCHED INTERCEPTOR MISSILE  
A-7 AIRCRAFT SUPPORT  
FAE FUEL AIR EXPLOSIVE

...FUNCTIONS/EQUIPMENT/CAPABILITIES

SHALL ESTABLISH AND MAINTAIN PRIMARY IN-HOUSE DEVELOPMENT, TEST, EVALUATION, AND IN-SERVICE ENGINEERING SUPPORT CAPABILITY FOR SPECIFIC NAVY AND MARINE CORPS PRODUCT LINES SUCH AS ANTI-AIR MISSILES, ETC. FACILITIES INCLUDE: MICHELSON LABORATORY, ELECTRONIC WARFARE RANGE, SOLID STATE DEVICES LABORATORY, FUZE TEST RANGE, PROPULSION RESEARCH, LABORATORY MICROELECTRONICS FACILITY, EXPLOSIVES RESEARCH, AND DEVELOPMENT FACILITY, GROUND AND AIRCRAFT RANGES, EXTERIOR AND TERMINAL BALLISTICS RANGES. NAVAL AIR FACILITY, AIRCRAFT SURVIVABILITY FACILITY SUPERSONIC TEST TRACK S, MICROWAVE ANLCHOIC FACILITIES, LASER LABORATORY DEVELOPMENT FACILITY; GROUND AND AIRCRAFT RANGES; EXTERIOR AND TERMINAL

INSTALLATION: WEAPONS EVALUATION FACILITY

ALBUQUERQUE, N.M.

C.O. CAPT R.H. CALDWELL

TECH.DIR. MR F.X. BUSHNER

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976	1977
	(ACTUAL)	(ACT + EST)
TOTAL RD&E	1.747	1.568
TOTAL PROCUREMENT	1.044	0.883
TOTAL O&M	1.735	1.516
TOTAL OTHER	4.038	3.395
TOTAL ANNUAL LAB	8.564	7.362
TOTAL INHOUSE	8.564	7.362
TOTAL INHOUSE RD&E	1.747	1.568
ANNUAL OPERATING COST	0.837	0.740

PERSONNEL	PERSONNEL DATA (END OF FY 1976)				NON-PROF
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF		
MILITARY	149	0	53		96
CIVILIAN	116	0	46		70
TOTAL	265	0	99		166

ACRES	SPACE AND PROPERTY			TOTAL	COST (MILLION \$)	
	SPACE (THOUSANDS OF SQUARE FEET)				REAL	PROP
	LAB	ADMIN	OTHER			EQUIP
7	0.400	53.592	94.926	148.918	9.600	0.571

...MISSION

MISSION: TEST, EVALUATE, AND PROVIDE OTHER TECHNICAL AND ENGINEERING SUPPORT FOR NUCLEAR AND ASSIGNED NON-NUCLEAR WEAPON SYSTEMS. CONDUCT SAFETY STUDIES ON NUCLEAR WEAPON SYSTEMS. PLAN AND COORDINATE THE NAVY NUCLEAR WEAPON SAFETY PROGRAM. CONDUCT NUCLEAR BIS ON NAVY ACFT.

...CURRENT IMPORTANT PROGRAMS

SUPPORT TO ERDA-COD PHASE 2 FOR TOMAHAWK PROGRAM  
 CONDUCT OF NAVY-ERDA SAFETY REVIEW OF NUCLEAR WEAPON SYSTEMS IN STOCKPILE  
 CONDUCT OF JCS NUCLEAR WEAPONS STOCKPILE IMPROVEMENT STUDY  
 ASSIST USA IN DEVELOPMENT OF NEW PROJECTILES  
 ASSIST IN PROVIDING A-18 AIRCRAFT WITH A NUCLEAR WEAPON CAPABILITY

...FUNCTIONS/EQUIPMENT/CAPABILITIES

INSP AND SURVEY OF NUCLEAR CAPABLE SHIPS. DEVELOP CHECK LISTS AND LOADING MANUALS FOR NUCLEAR AND NON-NUCLEAR WEAPONS. CONDUCT NUCLEAR WEAPONS SAFETY ANALYSES, EVALUATE HANDLING EQUIPMENT, AND PROVIDE FLIGHT SUPPORT TO ERDA LABS AND OTHER SERVICES. CONDUCT LASER RESEARCH IN CONJUNCTION WITH USAF. CONDUCT VULNERABILITY STUDIES.  
 TA-4J, A-7A, A-7C, F-4B, CV-10, AND C-118 ACFT AND MAINTENANCE CAPABILITY.  
 AIRBORNE HIGH-SPEED CAMERA, TELEMETRY, TAPE RECORDER, OSCILLOGRAPH, ACCELEROMETERS, TEMP. AND PRESS. SENSORS. ACCESS TO USAF ENVIRONMENTAL TEST FACILITIES INCLUDING NUCLEAR ELECTROMAGNETIC PULSE, TRANSIENT RADIATION EFFECTS ON AND BLAST FACILITIES. ACCESS TO USAF AND ERDA LABORATORIES CDC 6600 AND 7600 COMPUTERS, DROP TEST FACILITIES, EXPLOSIVE STORAGE MAGAZINES, AND WEAPON ASSEMBLY AREAS.

DEPARTMENT OF THE AIR FORCE

INSTALLATION: AERO PROPULSION LABORATORY

WPAFB, OH

CDR COL. JAMES R. NELSON

CH. SCI. DR. HANS VON OHAIN

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RD&E	60.401	61.453
TOTAL PROCUREMENT	0.000	0.000
TOTAL C&M	0.000	0.000
TOTAL OTHER	0.949	0.983
TOTAL ANNUAL LAB	61.350	62.436
TOTAL INHOUSE	11.426	12.045
TOTAL INHOUSE RD&E	10.477	11.062
ANNUAL OPERATING COST	2.241	2.075

PERSONNEL	PERSONNEL DATA (END OF FY 1976)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PRCF	NON- PRCF
MILITARY	49	6	43	6
CIVILIAN	354	25	191	163
TOTAL	403	31	234	169

ACRES	SPACE AND PROPERTY			COST (MILLION \$)		
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
40	227.103	32.999	390.434	650.536	12.303	18.849

#### ...MISSION

PLAN, FORMULATE, AND EXECUTE RESEARCH AND EXPLORATORY, ADVANCED AND PROTOTYPE DEVELOPMENT PROGRAMS IN AIR-BREATHING PROPULSION, AEROSPACE POWER GENERATION AND DISTRIBUTION, AIRCRAFT FUELS, FUEL AND LUBRICATION SYSTEMS, AND FIRE PROTECTION. PROVIDE OPERATIONAL AND SYSTEMS SUPPORT.

#### ...CURRENT IMPORTANT PROGRAMS

ADVANCED TURBOFAN ENGINE TECHNOLOGY DEMONSTRATORS  
OPTIMIZE AVAILABILITY AND COST OF AVIATION TURBINE FUELS  
VARIABLE CYCLE ENGINES FOR MULTI-MISSION AIRCRAFT  
RAMJETS FOR TACTICAL MISSILES  
AIRBORNE HIGH POWER FOR LASER SYSTEMS

#### ...FUNCTIONS/EQUIPMENT/CAPABILITIES

TURBINE ENGINE CONTROL TEST FAC, BATTERY DEVELOPMENT AND TEST FAC, MHD GENERATOR, LUBRICANT RIGS, SEAL TEST RIGS, BEARING RIGS, FUEL HANDLING FAC, FIRE RESEARCH LAB, COKER LAB, FUEL ANALYSIS LAB, COMBUSTION FAC, ROTOR TEST FAC, 6 SEA LEVEL TEST STANDS TO 20,000 LB THRUST, 2 TURBINE ENGINE ALTITUDE CELLS TO 5,000 LB THRUST-MACH 1.5-50,000 FT, 3 PROPELLER WHIRL RIGS TO 10,000 HP, DIRECT CONNECT RAMJET TEST FAC, RAMJET COMPONENTS LAB, ELECTRO AERODYNAMIC LASER, HIGH TEMPERATURE TURBINE COMPONENT TEST FAC, SAND EROSION RIG, AIRCRAFT SOLID STATE ELECTRICAL POWER FAC WITH THREE 350 HP DRIVE SOURCES AND AIRCRAFT SIMULATORS, VACUUM CHAMBERS, FUEL CELL LAB, SUPERCONDUCTIVITY LAB, HIGH POWER LAB TO 5 MW, THERMAL ENERGY STORAGE LAB, HYDRAULICS LAB, PLASMA PHYSICS LAB, 2 TURBOPROP TORQUE STANDS TO 8000 HP, HOLOGRAPHY LAB

INSTALLATION: ARMAMENT DEVELOPMENT AND TEST CENTER

EGLIN AFB, FL.

CDR. MG H.M.LANE

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RDT&E	98.508	126.137
TOTAL PROCUREMENT	279.462	200.000
TOTAL O&M	75.834	82.712
TOTAL OTHER	76.305	59.767
TOTAL ANNUAL LAB	530.109	469.617
TOTAL INHOUSE	173.591	180.292
TOTAL INHOUSE RDT&E	33.009	37.166
ANNUAL OPERATING COST	60.295	61.561

PERSONNEL	PERSONNEL DATA (END OF FY 1976)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	4379	92	1247	3132
CIVILIAN	2900	20	484	2416
TOTAL	7279	112	1731	5548

ACRES	SPACE AND PROPERTY			TOTAL	COST (MILLION \$)	
	SPACE (THOUSANDS OF SQUARE FEET)	LAB	ADMIN		REAL PROP	EQUIP
464248	131.545	553.506	9060.802	9745.853	201.451	400.000

### ...MISSION

RESPONSIBLE FOR AIR-LAUNCH TAC AND AIR DEF MISSILES, NONNUC MUN, GUIDED WEAP, ELEC-OPTICAL WEAP DEL SYS, A/C GUN, AMMO, RELATED EQUIP. RESPON FOR BASIC TECHNOLOGIES THRU DEVEL, TEST, ACQ AND DEPLOY. TEST MISSION INCL LEAD CENTER IN MUNITION, EMW, INTRUSION/INTERDICTION, AND CLIMATIC SIMUL.

### ...CURRENT IMPORTANT PROGRAMS

SPECIFIC FORCE INTEGRATED RECEIVER/ACCL, FX1 GYRO TEST/SFIR-J FX-1 TEST/IMAGING IR FREE FLIGHT DEMO  
ADVANCED MEDIUM RANGE AIR-TO-AIR MISSILE  
DT AND E/IOT AND E LOGB-2  
DT AND E/IOT AND E LOGB-2 PHASE 2

### ...FUNCTIONS/EQUIPMENT/CAPABILITIES

A CAPABILITY OF SCIENTIFIC/ENGINEERING PERSONNEL AND LABORATORIES FOR EXPL, ADV, & ENG DEV IN THE AREA OF NONNUCLEAR MUNITIONS. ARMAMENT SYSTEMS TEST ENVIRONMENT COVERING 728 SQ MI WITH LARGE ADJACENT WATER AREA; HAS 28 TEST AREAS WITH INSTRUMENTED FACILITIES INCLUDING PRECISION TRACKING RADARS AND PHOTO-OPTICS; IS USED FOR MUNITIONS TESTS AND ELECTROMAGNETIC TEST ENVIRONMENT; IS AN INSTRUMENTED COMPLEX OF THREAT SYSTEMS FOR EVAL EFFECT AND SYS TEST ENVIRON PROVIDES A REALISTIC ENVIRON FOR TEST WPNS ENVIRONMENT; PROVIDES A REALISTIC ENVIRONMENT FOR TESTING A WEAPON SYSTEM AGAINST AN ACTIVE DEFENSE SYS; A CLIMATIC LAB CAPABLE OF TESTING COMPLETE WPNS SYSTEMS, A COMPUTER SCIENCE LAB, A PHYSICAL SCIENCES LAB, A PHOTO LAB, AN INSTRUMENTATION/DESIGN/FABRICATION FACILITY, AFOBALLISTIC RESEARCH FAC, HIGH EXPLOSIVE R/D FACILITY, & A MISSILE SIM AND TEST LAB.

INSTALLATION: ARNOLD ENGINEERING DEVELOPMENT CENTER

TULLAHOMA, TN.

COR. COL. OLIVER H. TALLMAN

CH. SCI. DR. WM. P. HEISER

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RDT&E	97.394	99.061
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.041	0.040
TOTAL OTHER	7.687	441.446
TOTAL ANNUAL LAB	105.122	540.547
TOTAL INHOUSE	99.205	100.959
TOTAL INHOUSE RDT&E	97.394	99.061
ANNUAL OPERATING COST	10.700	11.452

PERSONNEL DATA (END OF FY 1976)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	84	8	57	27
CIVILIAN	152	5	61	91
TOTAL	236	13	118	118

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)	COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL REAL PROP EQUIP
39875	1151.654	201.411	534.954	1888.019 374.992 66.871

...MISSION

PRIMARY MISSION IS TO SUPPORT THE TIMELY ACQUISITION OF SUPERIOR AEROSPACE SYSTEMS BY CONDUCTING RESEARCH AND DEVELOPMENT TESTS IN GROUND ENVIRONMENTAL TEST FACILITIES WHICH SIMULATE THE ACTUAL CONDITIONS THAT THE HARDWARE WILL EXPERIENCE IN PERFORMING ITS MISSION

...CURRENT IMPORTANT PROGRAMS

CONTINUED B-1 ENGINE DEVELOPMENT TESTS AND AERODYNAMIC PERFORMANCE TESTS  
CONTINUED F-15 STORL SEPARATION TESTS AND ENGINE COMPONENT IMPROVEMENT  
CONDUCTED DEVELOPMENT TESTS ON F-16, A-10, A-7, M-X, AND COMPASS COPE  
CONTINUED EXTENSIVE MINUTEMAN PSRE, PQA AND AGING AND SURVEILLANCE TESTS  
OTHER SIGNIF TESTS. TRIDENT, ABRES, SPACE SHUTTLE, BIRD IMPACT, SENSOR PERF

...FUNCTIONS/EQUIPMENT/CAPABILITIES

AEDC IS COMPRISED OF ABOUT 40 TEST UNITS. INCLUDED ARE WIND TUNNELS WITH TEST SECTIONS TO 16 FT SQ AND SPEEDS FROM SUBSONIC TO MACH 22. TURBINE ENGINE TEST CELLS WHICH PROVIDE SIMULATION TO MACH 3, ROCKET TEST CELLS, THE LARGEST RATED AT .5 MILLION LBS THRUST AT ALTITUDE, SPACE SIMULATION CHAMBERS TO 42 FT DTS AND 82 FT HIGH, HYPERBALLISTIC RANGES, DUST AND SNOW EROSION FACILITY, BIRD IMPACT FACILITY, SEVERAL CAPTIVE TRAJECTORY SYSTEMS. THESE FACILITIES HAVE ESSENTIALLY SUPPORTED THE DEVELOPMENT AND QUALIFICATION OF EVERY MAJOR AERONAUTICAL, MISSILE AND SPACE SYSTEM DEVELOPMENT SINCE 1954. BY PLANNING FOR AN ADEQUATE GROUND ENVIRONMENTAL TEST PROGRAM IN THESE FACILITIES, DEVELOPMENT PROGRAM MANAGERS CAN ASSURE THAT SYSTEM DESIGN DEFICIENCIES ARE FOUND EARLY, PREVENTING COST AND SCHEDULE OVERRUNS.



INSTALLATION: AVIONICS LABORATORY

WPAFB, OH.

DIR DR WILLIAM EPPERS

CDR COL J.C. RICH

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RDT&E	125.294	127.000
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	3.078	3.100
TOTAL ANNUAL LAB	128.372	130.100
TOTAL INHOUSE	18.638	20.100
TOTAL INHOUSE RDT&E	15.560	17.000
ANNUAL OPERATING COST	3.500	3.600

PERSONNEL	PERSONNEL DATA (END OF FY 1976)				NON-PROF
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF		
MILITARY	179	12	147		32
CIVILIAN	821	35	460		361
TOTAL	1000	47	607		393

ACRES	SPACE AND PROPERTY (THOUSANDS OF SQUARE FEET)			COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
230	229.901	12.152	412.829	654.882	22.252	66.000

...MISSION  
MAINTAINS A BASE OF AVIONICS TECH&DEVELOPS&DEMONSTRATES COST-EFFECTIVE AVIONICS SYSTEMS TO IMPROVE OPERATIONAL CAPABILITIES AND REDUCE ACQ/OPN COST IN NAV, COMM, EW, RECON, WPN, DELIVERY&MODIFICATION OF AVIONICS IN THE INVENTORY.

...CURRENT IMPORTANT PROGRAMS  
DIGITAL AVIONICS INTEGRATED SYSTEMS FOR AEROSPACE APPLICATIONS  
ADVANCED POWER MANAGEMENT  
ELECTRONICALLY AGILE RADAR  
GPS-INERTIAL  
RADAR&GUIDANCE TECHNIQUES FOR DETECTION, TRACKING, ADVRS-WEATH&WEAP DELVRY

...FUNCTIONS/EQUIPMENT/CAPABILITIES  
CONDUCTS IN-HSE R&D TO MAINTAIN A HIGH DEGREE OF TECHNICAL COMPETENCE. ACTS AS AFSC FOCAL POINT FOR INFO IN ASSIGNED TECHNICAL AREAS. EXECUTES ASSIGNED PROJECTS FOR AND WORKS CLOSELY WITH ARMY, NAVY, NASA, ARPA, & OTHER GOVT AGENCIES. SUPPORTS AFSC PROGRAMS AND INSURES THE RAPID APPLICATION OF RESEARCH&TECHNOLOGY TO ADVANCED SYSTEMS. PROVIDES TECHNICAL SUPPORT TO CURRENT&FUTURE SYSTEMS PROGRAMS&OPERATIONAL PROJECTS IN AREAS OF ASSIGNED MISSION. PERFORMS CONCEPTUAL PLANNING, ANALYSIS&STUDIES. MAJOR FAC/EQUIP ARE DYNAMIC ANALYZER FOR ADVANCED RECON SYSTEMS-LASER RESEARCH FAC-SOLID STATE INTEGRATED CIRCUITS LAB ECM OCM SIMULATION FAC. COMMUNICATIONS SYSTEMS EVALUATION LAB. RECON SYST CHARACTERIZATION EVAL. FAC. UNDER REAL-WORLD ENVIRONMENTAL CONDITIONS.

INSTALLATION: CIVIL ENGINEERING CENTER

TYNDALL AFB FL

CDR. COL ROBERT M. ITEN

TECH DIR MR. ROBERT E. BRANDON

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RD&E	4.137	6.250
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	1.862	1.706
TOTAL OTHER	2.758	3.000
TOTAL ANNUAL LAB	8.757	10.956
TOTAL INHOUSE	4.234	5.144
TOTAL INHOUSE RD&E	0.414	0.938
ANNUAL OPERATING COST	0.100	0.100

PERSONNEL	PERSONNEL DATA (END OF FY 1976)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	189	10	75	114
CIVILIAN	27	3	17	10
TOTAL	216	13	92	124

ACRES	SPACE AND PROPERTY			COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
760	10.136	22.391	27.612	60.139	1.285	2.535

#### ...MISSION

AFCEC PROVIDES TECHNICAL SERVICES AND PLANNING ASSISTANCE IN THE CIVIL ENGINEERING (CE) AND ENVIRONMENTAL PLANNING AREAS. FUNCTIONS AS USAF LEAD CENTER FOR CE AND ENVIRONMENTAL QUALITY R AND D, AND IS THE LEAD TESTING AGENCY FOR CE RELATED SYSTEMS, TECHNIQUES, MATERIALS, AND EQUIP.

#### ...CURRENT IMPORTANT PROGRAMS

SURVIVABILITY/VULNERABILITY OF AEROSPACE FACILITIES  
 WARM FOG DISPERSAL SYSTEM FOR AIRFIELDS  
 ENVIRONMENTAL QUALITY AND PLANNING RESEARCH  
 NEW AIRCRAFT OPERATIONAL SURFACES AND RAPID REPAIR SYSTEMS  
 SPECIALIZED CIVIL ENGINEERING SERVICES AND ASSISTANCE TO USAF

#### ...FUNCTIONS/EQUIPMENT/CAPABILITIES

AFCEC HAS LABORATORIES AND TEST SITES TO PERFORM QUALITATIVE AND QUANTITATIVE MEASUREMENTS ON CORROSION, ENGINEERING MATERIAL, PAVEMENTS, SOIL MECHANICS, AIR QUALITY, WASTE TREATMENT PROCESS, FIRE EXTINGUISHERS AND AGENTS, AND HARDENED AIRCRAFT SHELTERS. EQUIPMENT INCLUDES FLAME AND ABSORPTION SPECTROPHOTOMETERS, CATHODIC PROTECTION MEASURING EQUIP, PORTABLE RADIOGRAPHIC EQUIPMENT, ENVIRONMENTAL ROOM, SHEAR MEASURING EQUIPMENT, COMPACTORS, STABILITY AND VISCOSITY TESTERS, AND WATER/WASTE STANDARD METHODS EQUIPMENT. REMOTE TERMINAL ACCESS IS AVAILABLE TO A CDC 6600 SCIENTIFIC COMPUTER WITH OFF-LINE DRUM PLOTTING CAPABILITY. A FIRE TEST SITE HAS FULL DISTRIBUTION AND FUEL/WATER SEPARATION SYSTEMS. A RUNWAY REPAIR TEST SITE HAS A 200X600 FT TYPICAL RUNWAY SECTION. A HARDENED AIRCRAFT SHELTER SITE HAS 3 SHELTERS FROM 40 TO 82 FT WIDE.

INSTALLATION: EASTERN TEST RANGE

PATRICK AFB, FL

CDR. COL OSCAR W. PAYNE

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RDT&E	1.216	0.000
TOTAL PROCUREMENT	3.385	4.534
TOTAL O&M	163.562	166.139
TOTAL OTHER	18.229	20.388
TOTAL ANNUAL LAB	186.392	191.061
TOTAL INHOUSE	82.497	74.378
TOTAL INHOUSE RDT&E	1.216	0.000
ANNUAL OPERATING COST	61.824	67.988

PERSONNEL	PERSONNEL DATA (END OF FY 1976)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	1032	1	108	924
CIVILIAN	1562	0	109	1453
TOTAL	2594	1	217	2377

ACRES	SPACE AND PROPERTY			COST (MILLION \$)		
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
17220	110.933	1125.084	4587.672	5823.689	386.791	421.902

#### ...MISSION

SUPPORT OF LAUNCH PROGRAMS AND AIR/GROUND-LAUNCHED MISSILE SYSTEMS FROM CCAFS AND KSC, OPERATION OF THE ARIS IN SUPPORT OF JCS REQUIREMENTS, SUPPORT OF AEROSPACE DEFENSE COMMAND ON-ORBIT TRACKING REQUIREMENTS AND SUPPORT OF SPECIAL PROJECTS, DOCUMENTED R&D TESTS AND TENANT ACTIVITIES.

#### ...CURRENT IMPORTANT PROGRAMS

F&M PROGRAMS - POLARIS, POSEIDON, TRIDENT AND CHEVALINE  
MIL SPACE SUPPORT PROGRAMS - TITAN IIIC AND ATLAS/AGENA  
MIL MISSILE SUPPORT PROGRAMS - SRAM/JTU, PERSHING AND SAM-D  
NASA - THOR/DELTA, ATLAS/CENTAUR AND TITAN/CENTAUR  
NASA - SPACE SHUTTLE PROGRAM

#### ...FUNCTIONS/EQUIPMENT/CAPABILITIES

AFETR CAPABILITIES INCLUDE: ASSEMBLY, PRE-LAUNCH TESTING, AND LAUNCH PERFORMANCE EVALUATION OF BALLISTIC MISSILES, LAUNCH VEHICLES, SPACE-CRAFT AND SATELLITES TO INCLUDE TRACKING, LONG-DISTANCE COMMUNICATIONS, DATA TRANSMISSION, COLLECTION AND REDUCTION. EQUIPMENT AND FACILITIES INCLUDE MAINLAND AND DOWN-RANGE INSTRUMENTATION AND COMMUNICATIONS, INSTRUMENTED SHIPS, SCIENTIFIC DATA PROCESSING EQUIPMENT AND FACILITIES, PHOTO/ELECTRO-OPTICAL SYSTEMS AND SERVICES, MISSILE IMPACT LOCATION SYSTEMS, METEOROLOGICAL WEATHER STATIONS AND EQUIPMENT, AND RANGE TIMING SYSTEMS. THE AFETR OPERATES AND MAINTAINS CCAFS, PATRICK AFB, MAINLAND SITES AND DOWN-RANGE STATIONS. SUPPORT FUNCTIONS INCLUDE LAUNCH SUPPORT SERVICES AND GENERAL MANAGEMENT OF THE ETR, INCLUDING PLANT ENGINEERING, CONTRACTOR OPERATIONS, LABORATORY, MEDICAL, AND OTHER SPECIAL SERVICES.

INSTALLATION: FLIGHT DYNAMICS LABORATORY

WPAFB, OH.

CDR COL A.E. PREYSS

CH. SCI. DR K.I. COLLIER

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RD&E	89.589	73.283
TOTAL PROCUREMENT	0.000	0.000
TOTAL C&M	0.321	0.321
TOTAL OTHER	3.745	4.924
TOTAL ANNUAL LAB	93.655	78.528
TOTAL INHOUSE	31.391	28.259
TOTAL INHOUSE RD&E	27.931	24.627
ANNUAL OPERATING COST	5.232	5.500

PERSONNEL	PERSONNEL DATA (END OF FY 1976)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL ORNF	NON- PROF
MILITARY	199	17	125	74
CIVILIAN	854	45	492	362
TOTAL	1053	62	617	436

ACRES	SPACE AND PROPERTY			COST (MILLION \$)		
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
90	497.000	161.820	258.269	917.089	25.759	68.500

#### ...MISSION

PLAN AND EXECUTE USAF RESEARCH EXPLORATORY AND ADVANCED DEV PROGRAMS FOR AEROSPACE FLT VEHICLE STRUCTURES AERODYNAMICS FLT CONTROL VEHICLE DYN AND VEHICLE EQUIP. LEAD AFSC LAB FOR EXPER FLT VEHICLES. AFSC FOCAL PT FOR NONNUCLEAR SURVIVABILITY PROG. EVALUATE CONTRACTOR I R AND O PROG.

#### ...CURRENT IMPORTANT PROGRAMS

INTEGRATED FLIGHT/FIRE CONTROL  
ADVANCED COMPOSITE STRUCTURES  
ADVANCED FIGHTER TECHNOLOGY INTEGRATOR  
COMBINED ENVIRONMENT RELIABILITY TEST  
NATIONAL HYPERSONIC FLIGHT TEST FACILITY

#### ...FUNCTIONS/EQUIPMENT/CAPABILITIES

50MM TEST FACILITY IS A 30 MIN CONTINUOUS FLOW ARC HEATED HYPERSONIC W/T HAVING A RE-ENTRY NOSE TIP (RENT) TEST LEG AND HYPERSONIC TEST LEG (HTL) STRUCTURES TEST FACILITY PERMITS STRUCTURAL TESTING OF FULL SCALE VEHICLES AND COMPONENTS WITH PROGRAM CONTROLLED SIMULATION OF FORCE AND THERMAL FLT ENVIRONMENTS. LANDING GEAR TEST FACILITY DYNAMICALLY SIMULATES LANDING GEAR COMPONENT PERFORMANCE CHARACTERISTICS THRU PROGRAMMED PARAMETERS OF LOADS VELOCITIES TEMP ETC. ENGINEERING FLT SIMULATION FAC CONTAINS FLT SIMULATORS AND COMPUTING EQUIP TO DEVELOP CONTROL DISPLAY CONCEPTS AND EVALUATE MANS PERFORMANCE ON SPECIFIC DISPLAY AND CONTROL SYSTEMS. BALLISTIC RANGES TEST VULNERABILITY OF AIRCRAFT SUBSYSTEMS BY SIMULATING THREAT FUEL STRUCTURAL AND AERODYNAMIC ENVIRONMENTS.

INSTALLATION: FLIGHT TEST CENTER

EDWARDS AFB, CA.

CDR MG T.J. STAFFORD

TECH DIR DP F.N. STOLIKER

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RD&E	71.642	72.436
TOTAL PROCUREMENT	0.002	0.000
TOTAL O&M	1.451	1.396
TOTAL OTHER	46.326	41.191
TOTAL ANNUAL LAB	119.421	115.023
TOTAL INHOUSE	94.175	95.115
TOTAL INHOUSE RD&E	53.750	53.640
ANNUAL OPERATING COST	23.632	23.951

PERSONNEL	PERSONNEL DATA (END OF FY 1976)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	3570	1	189	3381
CIVILIAN	1507	20	386	1121
TOTAL	5077	21	575	4502

ACRES	SPACE AND PROPERTY			COST (MILLION \$)		
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
246323	998.928	258.405	6241.936	7499.269	227.608	82.880

...MISSION

PLANS, CONDUCTS/SUPPORTS AND REPORTS ON TESTS OF MANNED/UNMANNED AEROSPACE VEH INCL ALL-WEATHER TESTS. CONDUCTS FLT EVAL OF AEROSPACE RSCH VEH AND DEV TEST OF AERODYNAMIC DECELERATORS. OPR USAF TEST PILOT SCHOOL. SUPPORTS USAF, DOD, GOV, FOREIGN AND CONTRACTOR TEST AND EVALUATION

...CURRENT IMPORTANT PROGRAMS

F-15 DT AND E  
A-10 DT AND E  
B-1 DT AND E  
AMST FLY-OFF  
E-3A DT AND E

...FUNCTIONS/EQUIPMENT/CAPABILITIES

TECHNICAL FACILITIES AND EQUIPMENT ARE AVAILABLE TO PROVIDE A COMPLETE RANGE OF SERVICES FOR CONDUCTING DT AND E FLT TESTS OF AERONAUTICAL SYS AND TO ENHANCE R-2508 RANGE COMPLEX. TO CONDUCT FLT EVAL AND RECOVER RSCH VEH AND TO TRAIN TEST PILOTS. ENGINEERING FACILITIES, REALTIME INSTRUMENTED RANGES, DATA COLLECTION, REDUCTION AND ANALYSIS FACILITIES, PHOTO/TV, ACFT/ENGINE MAINT, TEST EQUIP, ELECTRONIC SHOPS AND A COMPLEX OF DRY LAKES FOR RECOVERY AND EMERGENCY LANDINGS PROVIDE SUPPORT FOR ALL PROGRAMS. OTHER FACILITIES ARE PRECISION IMPACT GUNNERY BOMBING, INFRARED PHOTO RESOLUTION, RADAR FIDELITY, TACTICAL AND OPTICAL RANGES, ENGINEERING SIMULATOR, MUNITIONS STORAGE AND CHECKOUT AND CONTRACTOR-ASSIGNED HANGARS, SHOPS, OFFICE SPACE, ETC.

INSTALLATION: FRANK J. SEILER RESEARCH LABORATORY

USAF ACADEMY, CO.

CDR. COL. M.D. BACON

CH. SCI. LT. COL T.M. TOMASKOVIC

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RDT&E	0.793	0.760
TOTAL PROCUREMENT	0.000	0.000
TOTAL OEM	0.000	0.000
TOTAL OTHER	0.451	0.500
TOTAL ANNUAL LAB	1.244	1.260
TOTAL INHOUSE	1.082	1.130
TOTAL INHOUSE RDT&E	0.631	0.630
ANNUAL OPERATING COST	0.032	0.035

PERSONNEL	PERSONNEL DATA (END OF FY 1976)			
	AUTHORIZED STRENGTH	TOTAL PMDS	TOTAL PROF	NON- PROF
MILITARY	22	17	19	3
CIVILIAN	9	1	4	5
TOTAL	31	18	23	8

ACRES	SPACE AND PROPERTY			COST (MILLION \$)		
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
0	9.900	2.800	0.240	12.940	0.000	1.865

#### ...MISSION

CONDUCT RESEARCH IN AEROSPACE-MECHANICS, APPLIED MATHEMATICS & CHEMISTRY. ENCOURAGE & SUPPORT ACADEMY FACULTY & CADET RESEARCH BY DIRECT PARTICIPATION. MONITOR FACULTY CONSULTANT PROG, SUMMER RSCH PROG, FOCAL POINT FOR USAF ACADEMY RESEARCH PROPOSED TO DL RESEARCH & TECHNOLOGY LABS (AFSC).

#### ...CURRENT IMPORTANT PROGRAMS

BATTERY RESEARCH & ELECTROCHEMISTRY OF MOLTEN SALTS, ENERGETIC MATERIALS RESEARCH, CHEMICAL MOLECULAR DYNAMICS OF LASERS AND PLUMES. MODELING, OPTIMIZATION, NONLINEAR CONTROL THEORY, ESTIMATION THEORY, MICROPROCESSOR RESEARCH IN ADAPTIVE OPTICS. FLUID MECHANICS, UNSTEADY AERODYNAMICS.

#### ...FUNCTIONS/EQUIPMENT/CAPABILITIES

MOLTEN SALT MELT STRUCTURE, CONDUCTIVITY & ELECTRODE REACTIONS. EXPLOSIVE & PROPELLANT SYNTH, DECOMPOSITION MECHANISMS & DETONATION PHENOMENA. GENERATION, MSMT, SPECTROSCOPY & MO CALC. OF EXCITED STATE SPECIES. IR, UV, NMR, EPR, X-RAY & MASS SPECTS, GAS & LIQUID CHROMATOGRAPHS, ELECTRON MICROSCOPE, SPECIAL SPECTROMETERS & CONDUCTIVITY EQUIP., ASSOC. FACILITIES FOR WET CHEMISTRY. ADVANCED ANALYSIS & EVALUATION TECHNIQUES FOR INERTIAL GUIDANCE SENSORS USING 2-AXIS TEST TABLE (GYRO), AUTOMATIC AZIMUTH ALIGNMENT EQUIPMENT & ELECTRONIC CONTROL EQUIP. FOR 50 SERIES INERTIAL DEVICES LOCATED IN A CLASS 1000 CLEAN LAB ON 80 TON AIR SUPPORTED STABLE PLATFORM. PDP 11/45 MINICOMPUTER & SOFTWARE TO AUTOMATE GYRO RESEARCH. AERODYNAMIC RESEARCH IN USAFA SUBSONIC AND TRANSONIC WIND TUNNELS, HOLOGRAPHIC & OTHER OPTICAL FLOW VISUALIZATION INSTRUMENTATION.

INSTALLATION: GEOPHYSICS LABORATORY

HANSCOM AFB, MS.

CDR COL BERNARD S. MORGAN JR

CH. SCI. DR JOHN N. HOWARD

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RDT&E	55.831	46.388
TOTAL PROCUREMENT	0.028	0.000
TOTAL O&M	0.001	0.001
TOTAL OTHER	5.207	3.250
TOTAL ANNUAL LAB	61.067	49.639
TOTAL INHOUSE	23.317	26.789
TOTAL INHOUSE RDT&E	21.024	23.788
ANNUAL OPERATING COST	9.000	6.000

PERSONNEL	PERSONNEL DATA (END OF FY 1976)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	120	12	36	84
CIVILIAN	509	77	328	181
TOTAL	629	89	364	265

ACRES	SPACE AND PROPERTY SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
269	422.418	14.813	31.383	468.614	10.199	38.526

#### ...MISSION

CONDUCTS AND SUPPORTS AF RELEVANT RESEARCH AND EXPLORATORY DEVELOPMENT IN ENVIRONMENTAL AND PHYSICAL SCIENCES CES WITH MAJOR EMPHASIS ON GEOPHYSICS. ALSO CONDUCTS UCTS AND SUPPORTS SPECIFICALLY ASSIGNED ADVANCED DEVELOPMENT EFFORTS.

#### ...CURRENT IMPORTANT PROGRAMS

SPACECRAFT CHARGING TECHNOLOGY  
SURFACE WEATHER OBSERVING AUTOMATION  
STRATOSPHERIC ENVIRONMENTAL IMPACT ASSESSMENTS  
OPTICAL, INFRARED AND UV BACKGROUNDS FOR SURVEILLANCE SYSTEMS  
GEODETIC AND GEOKINETIC EFFECTS ON MISSILE CFP

#### ...FUNCTIONS/EQUIPMENT/CAPABILITIES

CONDUCTS RESEARCH AND TECHNICAL DEVELOPMENT IN TERRESTRIAL, AEROSPACE, OPTICAL AND SOLAR PHYSICS AND IN EM WAVE PROPAGATION RELATING TO AIR FORCE NEEDS. EQUIPMENT AND FACILITIES INCLUDE RADIO TELESCOPES FOR SOLAR RESEARCH; TWO C-130 AIRCRAFT FOR METEOROLOGICAL RESEARCH; ROCKET AND BALLOON LAUNCH FACILITIES; TWO KC-135 AND ONE C-130 AIRCRAFT FOR OPTICAL, UPPER ATMOSPHERIC AND NEAR EARTH SPACE STUDIES; AND A CDC 6600 COMPUTER SYSTEM.

INSTALLATION: HUMAN RESOURCES LABORATORY

BROOKS AFB, TX.

CDR COL. DAN D FULGHAM

VCDR COL. KENNETH E STOUT

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RDT&E	13.242	19.163
TOTAL PROCUREMENT	0.000	0.000
TOTAL OEM	0.000	0.000
TOTAL OTHER	1.752	1.839
TOTAL ANNUAL LAB	14.994	21.002
TOTAL INHOUSE	7.311	8.167
TOTAL INHOUSE RDT&E	5.559	6.328
ANNUAL OPERATING COST	1.060	1.166

PERSONNEL	PERSONNEL DATA (END OF FY 1976)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	125	14	65	60
CIVILIAN	230	41	109	121
TOTAL	355	55	174	181

ACRES	SPACE AND PROPERTY			COST (MILLION \$)		
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
13	69.511	35.654	36.582	141.747	2.771	27.903

#### ...MISSION

PRINCIPAL AFSC ORGANIZATION CHARGED WITH PLANNING AND EXECUTING EXPLORATORY AND ADVANCED DEVELOPMENT PROGRAMS FOR SELECTION, MOTIVATION, TRNG, RETENTION, EDUCATION, UTILIZATION AND CAREER DEVELOPMENT OF AF MILITARY PERSONNEL; COMPOSITION OF PERSONNEL FORCE; AND TRNG EQUIPMENT.

#### ...CURRENT IMPORTANT PROGRAMS

ADVANCED DEVELOPMENT IN THE USE OF SIMULATION FOR UNDERGRADUATE PILOT AND AEROSPACE CREW TRNG. IMPROVED PERSONNEL SELECTION, CLASSIFICATION, EVALUATION AND UTILIZATION TECHNIQUES. HUMAN FACTORS IN DESIGN OF TRNG SYSTEMS. DESCRIBING, EVALUATING AND STRUCTURING AF OCCUPATIONS. IMPROVED TECHNICAL TRNG THROUGH ADVANCED INSTRUCTIONAL SYSTEMS.

#### ...FUNCTIONS/EQUIPMENT/CAPABILITIES

OCCUPATIONAL ANALYSIS; PERSONNEL PROCUREMENT, CLASSIFICATION, RETENTION AND SEPARATION; COMPUTER SIMULATION MODELS FOR PERSONNEL SYSTEMS; MAN-POWER REQTS OF AF WEAPONS SYS; TRNG TECHNIQUES; DESIGN OF SIMULATORS AND OTHER TRNG DEVICES; CONDUCT TRNG RESEARCH ASSOCIATED WITH PILOT TRNG USING SOPHISTICATED HIGH-FIDELITY A/C SIMULATORS; ADVANCED INSTRUCTIONAL SYS FOR INDIVIDUALLY PACED COMPUTER AIDED TECH INSTRUCTION; ADVANCED SIMULATOR FOR UPT; ADVANCED INSTRUCTIONAL SYSTEM; SIMULATION AND TRAINING ADVANCED RESEARCH SYSTEM; SIMULATION FOR MAINTENANCE TRAINING. TECHNICAL LIBRARY, PERSONNEL TESTING ROOMS; COMPUTER, UNIVAC 1108 ELECTRONIC DATA PROCESSING SYSTEM WITH 2 CPUS, 12 TAPE DRIVES, 16 UNISCOPE INTERACTIVE TERMINALS, GRAPHICS DISPLAY CONSOLE, 2 PRINTERS, CARD READER, CARD PUNCH. ELEC ASSOC TR 48 ANALOG COMPUTER.



INSTALLATION: MATERIALS LABORATORY

WPAFB, OH.

DIR MR. G.P.PETERSON

CDR COL L.D. WHIPPLE

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RDT&E	41.921	45.938
TOTAL PROCUREMENT	22.897	32.595
TOTAL OEM	0.000	0.000
TOTAL OTHER	1.434	1.506
TOTAL ANNUAL LAB	66.252	80.039
TOTAL INHOUSE	16.072	16.794
TOTAL INHOUSE RDT&E	14.638	15.288
ANNUAL OPERATING COST	3.669	3.808

PERSONNEL	PERSONNEL DATA (END OF FY 1976)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	53	13	67	14
CIVILIAN	345	45	243	102
TOTAL	398	58	310	116

ACRES	SPACE AND PROPERTY			COST (MILLION \$)		
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
15	222.809	25.169	111.156	359.134	18.851	14.200

...MISSION  
PLAN/EXECUTE EXPLORATORY AND ADVANCED DEVELOPMENT, AND ASSIGNED BASIC RSCH. PROGS. FOR MATERIALS. PROVIDE TECH./MANAGEMENT ASSISTANCE FOR STUDIES, ANALYSES, DEVELOPMENT PLANNING, ACQUISITION, TEST, EVALUATION MOD. AND OPN. OF AEROSPACE SYSTEMS. MANAGE/DIRECT A.F. DIRECT MFG. PROG.

...CURRENT IMPORTANT PROGRAMS  
ADVANCED DEVEL. PROG., COMPOSITES, METALS, AND LASER HARDENING  
MANUFACTURING TECHNOLOGY COST REDUCTION PROGRAM  
THERMAL PROTECTION MATERIALS FOR REENTRY VEHICLES  
PROPULSION MATERIALS  
SYSTEMS SUPPORT

...FUNCTIONS/EQUIPMENT/CAPABILITIES  
MATERIALS RESEARCH AND DEVELOPMENT FACILITIES AND CAPABILITIES FOR: AEROSPACE STRUCTURES, TPS FOR BALLISTIC RV, AND ENGINES, FLUIDS, LUBRICANTS, FLUID CONTAINMENT, PROPULSION, COATINGS, FIBERS, EM WINDOWS, SENSORS, DISPLAYS, LASER WINDOWS, AND OPT DEVICES, ELECT COMPONENTS, NON-DESTRUCT. TESTING, POLYMERS, ADHESIVES, NONMETALLIC MATRIX COMPOSITES, ELASTOMERS, METALS, ALLOYS, METAL COMPOSITES, METAL PROCESSING, INTERMETALLICS, CERAMICS, STATIC AND DYNAMIC BEHAVIOR, JOINING, GRAPHITE, ELECTRONIC, PHYSICAL/CHEMICAL ANALYSIS. OTHER MAJOR MATERIALS FUNCTIONS: MANUFACTURING TECHNOLOGY, SYSTEMS APPLICATION, SYSTEMS SUPPORT, THERMAL PROTECTION MATERIALS.

INSTALLATION: ROCKET PROPULSION LABORATORY

EDWARDS AFB, CA.

CDR. COL. EARL B. ESSING

CH. SCI. DR. RICHARD W. WEISS

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RDT&E	29.093	33.731
TOTAL PROCUREMENT	1.500	0.458
TOTAL C&M	0.007	0.000
TOTAL OTHER	2.714	2.977
TOTAL ANNUAL LAB	33.314	37.166
TOTAL INHOUSE	13.947	14.257
TOTAL INHOUSE RDT&E	11.631	11.702
ANNUAL OPERATING COST	0.325	0.350

PERSONNEL	PERSONNEL DATA (END OF FY 1976)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	177	6	77	100
CIVILIAN	264	10	93	171
TOTAL	441	16	170	271

ACRES	SPACE AND PROPERTY			COST (MILLION \$)		
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
72560	419.046	86.848	4.780	510.674	125.000	44.600

#### ...MISSION

CONDUCT THE AIR FORCE'S ROCKET PROPULSION EXPLORATORY AND ADV DEVEL. PROGRAMS TO PROVIDE ADV TECH FOR FUTURE ICBM'S, STRATEGIC AND TACTICAL AIR LAUNCHED MISSILES, SPACE VEHICLES, AND SATELLITES. PROVIDES ROCKET PROPULSION TECHNOLOGICAL SUPPORT TO DOD AND NON-DOD AGENCIES.

#### ...CURRENT IMPORTANT PROGRAMS

PROVIDE PROPULSION OPTIONS FOR MX FULL SCALE DEVEL. PROVIDE SOLID ROCKET SIGNATURE, PERFORMANCE, AND ENERGY MGT OPTIONS FOR AIR LAUNCHED MISSILES. DEMO 30 TO 50 PERCENT REDUCTION IN ACQUISITION COST OF HIGH PRODUCTION RATE SOLID ROCKETS. DEMONSTRATE AN IMPROVED PERFORMANCE KICK MOTOR FOR SPACE APPL. DEMO LONG LIFE MONOPROPELLANT SATELLITE THRUSTERS.

#### ...FUNCTIONS/EQUIPMENT/CAPABILITIES

A CHEM LAB FOR SYNTHESIS, ANALYSIS AND FORMULATION OF NEW PROPELLANTS. FACILITIES FOR MIXING, CASTING, CURING AND TESTING SOLID ROCKET MOTORS. A SOLID MOTOR TEST AND EVAL COMPLEX FOR INVESTIGATION OF COMBUSTION, AGING, STRUCTURAL INTEGRITY, BALLISTIC PERFORMANCE AND HIGH TEMPERATURE COMPONENTS. LAB FOR TESTING SMALL ATTITUDE CONTROL AND SATELLITE PROPULSION SYSTEMS AND COMPONENTS UNDER SIMULATED SPACE ENVIRONMENTS. ALTITUDE TESTING OF LIQUID AND SOLID ROCKETS UP TO 50,000 POUNDS THRUST. AMBIENT TESTING OF LIQUID OR SOLID ROCKETS UP TO 500,000 POUNDS THRUST. IN-HOUSE ANALYTICAL CAPABILITY FOR DESIGN, ANALYSIS, AND TEST DATA REDUCTION, SHOPS FOR FABRICATING TEST HARDWARE AND TEST SYSTEMS. A FULL SCALE REENTRY NOSETIP TEST FACILITY.

INSTALLATION: ROME AIR DEVELOPMENT CENTER

GRIFFISS AFB, N.Y.

CDR COL JOHN Z. DILLON

CH. SCI. DR JOHN S. BURGESS

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RDT&E	57.674	69.100
TOTAL PROCUREMENT	40.803	40.000
TOTAL O&M	11.105	12.000
TOTAL OTHER	54.908	55.500
TOTAL ANNUAL LAB	164.490	176.600
TOTAL INHOUSE	20.200	21.499
TOTAL INHOUSE RDT&E	15.124	16.249
ANNUAL OPERATING COST	12.203	13.000

PERSONNEL	PERSONNEL DATA (END OF FY 1976)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	237	12	102	135
CIVILIAN	1203	60	630	573
TOTAL	1440	72	732	708

ACRES	SPACE AND PROPERTY			COST (MILLION \$)	
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL REAL PROP	EQUIP
1494	LAB 802.827	ADMIN 83.496	OTHER 128.713	1015.036	24.873 54.553

...MISSION

CONDUCTS A FULL SPECTRUM RESEARCH, EXPLORATORY AND ADVANCED DEVELOPMENT PROGRAM IN THE UNIQUE AREA OF INTELLIGENCE DATA EXPLOITATION AND HANDLING, MAPPING AND CHARTING, INCLUDING SELECTIVELY ASSIGNED ENGINEERING DEVELOPMENT AND SYSTEM ACQUISITION PROGRAMS.

...CURRENT IMPORTANT PROGRAMS

ELECTROMAGNETIC RELIABILITY AND COMPATIBILITY ANALYSIS  
ARRAY RADAR AND ECCM DEVELOPMENTS  
PHOTOGRAMMETRIC TARGETING SYSTEM  
MULTILATERATION RADAR SURVEILLANCE/STRIKE SYSTEM  
RADIATION HARDENED MICROCIRCUITS

...FUNCTIONS/EQUIPMENT/CAPABILITIES

RADC PLANS AND CONDUCTS RESEARCH, EXPLORATORY AND ADVANCED DEVELOPMENT PROGRAMS IN COMMAND, CONTROL, AND COMMUNICATIONS (C3) ACTIVITIES, AND IN THE C-CUBED AREAS OF INFORMATION SCIENCES AND INTELLIGENCE. THE PRINCIPAL TECHNICAL MISSION AREAS ARE COMMUNICATIONS, ELECTROMAGNETIC GUIDANCE AND CONTROL, SURVEILLANCE OF GROUND AND AEROSPACE OBJECTS, INTELLIGENCE DATA COLLECTION AND HANDLING, INFORMATION SYSTEM TECHNOLOGY, IONOSPHERIC PROPAGATION, SOLID STATE SCIENCES, MICROWAVE PHYSICS AND ELECTRONIC RELIABILITY, MAINTAINABILITY AND COMPATIBILITY.

INSTALLATION: SCHOOL OF AEROSPACE MEDICINE

BROOKS AFB, TX.

CDR. COL. R.F. MCIVER

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RDT&E	10.185	11.376
TOTAL PROCUREMENT	0.120	0.078
TOTAL O&M	2.089	2.154
TOTAL OTHER	8.180	8.250
TOTAL ANNUAL LAB	20.574	21.858
TOTAL INHOUSE	19.033	19.256
TOTAL INHOUSE RDT&E	8.715	8.822
ANNUAL OPERATING COST	1.920	2.000

PERSONNEL	PERSONNEL DATA (END OF FY 1976)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	392	57	84	308
CIVILIAN	285	33	110	175
TOTAL	677	90	194	483

ACRES	SPACE AND PROPERTY			COST (MILLION \$)		
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
74	360.655	77.980	48.737	487.372	13.143	22.343

#### ...MISSION

CONDUCT EXPLORATORY RESEARCH AND DEVELOPMENT PROGRAMS IN AEROSPACE BIO-TECHNOLOGY. INCLUDES LIFE SUPPORT, AEROSP MEDICINE, RADIOBIOLOGY, AND OTHER BIOMEDICAL PROGRAMS. PROVIDE MEDICAL EVALUATION AND CONSULTATION FOR FLYING PERSONNEL WITH MEDICAL PROBLEMS AFFECTING FLYING STATUS

#### ...CURRENT IMPORTANT PROGRAMS

MEDICAL ASPECTS OF AEROSPACE OPERATIONS  
CREW RESPONSE TO ACCELERATION AND MISSION DURATION IN USAF SYSTEMS  
MAN-ATMOSPHERE ENVIRONMENT INTERACTION IN USAF SYSTEMS  
RADIOBIOLOGY IN AEROSPACE OPERATIONS  
EXPLORATORY DEVELOPMENT OF MEDICAL EQUIPMENT AND SYSTEMS

#### ...FUNCTIONS/EQUIPMENT/CAPABILITIES

USAF SCHOOL OF AEROSPACE MEDICINE RESEARCH IN AEROSPACE MED PROBLEMS. ENVIRONMENTAL STRESS, DEVELOPMENTAL ENGINEERING, RADIOBIOLOGY, LASER HAZARDS, BIOMETRICS, BIOMEDICAL ENGINEERING AND EPIDEMIOLOGY FACILITIES. WHOLE BODY COUNTER, HUMAN CENTRIFUGE, VARIOUS TEST CELLS AND RESEARCH CHAMBERS, NEUTRON GENERATOR, ROTATIONAL FLIGHT SIMULATOR, KILG-CURIE-COBALT 60 RADIATION SOURCE, AEROSPACE MEDICAL SCIENCE LAB, AEROSPACE MEDICAL CONSULTATIVE SERVICES, AEROMEDICAL EVALUATION, CLINICAL SCIENCE, OCULOTHERMAL, RESEARCH OPTICAL, AUDIOLOGY, VESTIBULAR, PSYCHOBIOLOGY, RADIOISOTOPE, AEROMEDICAL STANDARDS, AND LASER HAZARDS FACILITIES. ZEISS PHOTO-COAGULATOR, VECTORCARDIOGRAPH MACHINE, BALLISTOCARDIOGRAPH MACHINE PHONO CARDIOGRAPH MACHINE, MASS SPECTROMETERS, AUTOSCAN ELECTRON MICROSCOPE SYSTEM, AND REMOTE INTERACTIVE GRAPHIC TERMINALS SYSTEM

INSTALLATION: SPACE AND MISSILE TEST CENTER

VANDENBURG AFB, CA.

CDR BG DON HARTUNG

ATG TECH DIR MR. EUGENE E. CLARY

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RDT&E	48.209	50.828
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	12.720	13.373
TOTAL ANNUAL LAB	60.929	64.201
TOTAL INHOUSE	16.705	17.271
TOTAL INHOUSE RDT&E	9.798	10.329
ANNUAL OPERATING COST	0.327	0.416

PERSONNEL	PERSONNEL DATA (END OF FY 1976)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	397	3	162	235
CIVILIAN	327	0	113	214
TOTAL	724	3	275	449

ACRES	SPACE AND PROPERTY (THOUSANDS OF SQUARE FEET)			COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
55567	91.407	334.384	431.954	857.745	94.520	76.616

...MISSION  
MANAGE SPACE, MISSILE, AND AERONAUTICAL TEST OPERATIONS. DEVELOP, MANAGE, AND OPERATE SAMTEC AS A NATIONAL RANGE IN SUPPORT OF DOD AND NON-DOD PROGRAMS.

...CURRENT IMPORTANT PROGRAMS  
MINUTEMAN II AND III OPERATIONAL TESTING  
AERONAUTICAL PROGRAMS INCLUDING BOMARC, B-1, CRUISE MISSILE, AND F-14/15  
ABRES PROGRAMS  
CLASS AND UNCLASS SPACE LAUNCHES USING ATLAS, THOR, TITAN, AND SCOUT  
MINUTEMAN III R AND D

...FUNCTIONS/EQUIPMENT/CAPABILITIES  
SAMTEC CAPABILITIES INCLUDE TEST LAUNCH AND RANGE SUPPORT. TEST LAUNCH INCLUDES - ASSEMBLY AND PRELAUNCH TESTING OF LAUNCH VEHICLE SYSTEMS USING THOR, ATLAS, SCOUT, M/M AND TITAN BOOSTERS - AGENA AND TITAN III UPPER STAGES - PAYLOAD AND VEHICLE INTEGRATION AND CHECKOUT - AND LAUNCH CONTROL. RANGE SUPPORT INCLUDES NEAR AND FAR TERM RANGE INSTRUMENTATION PLANNING, DATA GATHERING ON BALLISTIC/ORBITAL/PROBE LAUNCHES, AERONAUTICAL SYSTEMS, AND OTHER TESTS. VARIOUS FIXED AND MOBILE TELEMETRY SYSTEMS, TRACKING RADARS, AND OPTICS SYSTEMS ARE AVAILABLE. LAUNCH AZIMUTHS VARY FROM 165 TO 310 DEGREES. IMPACT SCORING OF BALLISTIC PAYLOADS IS AVAILABLE AT ISLAND SITES. AERONAUTICAL FLIGHTS ARE CONDUCTED IN A WELL INSTRUMENTED OFFSHORE TEST AREA. LAUNCH FACILITIES AND RANGE INSTRUMENTATION CAN BE RECONFIGURED TO MEET PROGRAM REQUIREMENTS.

INSTALLATION: WEAPONS LABORATORY

KIRTLAND AFB, N.M.

CDR. COL. G.J. FREYER

CH. SCI. DR. A.H. GUENTHER

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RDT&E	99.643	133.257
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.371	0.400
TOTAL OTHER	12.443	12.900
TOTAL ANNUAL LAB	112.457	146.557
TOTAL INHOUSE	30.312	37.341
TOTAL INHOUSE RDT&E	17.707	24.291
ANNUAL OPERATING COST	1.381	1.910

PERSONNEL	PERSONNEL DATA (END OF FY 1976)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	682	75	422	260
CIVILIAN	459	31	219	240
TOTAL	1141	106	641	500

ACRES	SPACE AND PROPERTY			COST (MILLION \$)		
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
702	531.810	123.071	125.495	780.376	18.785	40.443

...MISSION  
RESPONSIBLE FOR EXPLORATORY, ADVANCED, AND ENGINEERING DEVELOPMENT PROGRAMS IN NUCLEAR WEAPON EFFECTS, COMPONENTS, ADVANCED WEAPON TECHNOLOGY, LASER SYSTEMS, RADIATION HAZARDS, AND NUC SURVIVABILITY/VULNERABILITY. DEVELOP SYS NUC HARDNESS CRITERIA, ASSES SYS, NUC SAFETY

...CURRENT IMPORTANT PROGRAMS  
ADVANCED RADIATION TECHNOLOGY  
ADVANCED WEAPON TECHNOLOGY  
NUCLEAR SURVIVABILITY/VULNERABILITY ANALYSIS AND TESTING  
NUCLEAR SAFETY ANALYSIS AND DESIGN CRITERIA  
NUCLEAR WEAPONS EFFECTS ANALYSIS AND TESTING

...FUNCTIONS/EQUIPMENT/CAPABILITIES  
NUCLEAR WEAPONS EFFECTS SIMULATION, SAFETY, COMPONENT ASSESSMENT AND ANALYSIS OF WEAPONS SYSTEMS NUCLEAR HARDNESS ARE CONDUCTED IN ENGINEERING TEST LABORATORIES AND PHYSICS LABORATORIES. SIMULATION TESTS ON MISSILES, AIRCRAFT, AND COMPONENTS USE ELECTROMAGNETIC PULSE SIMULATORS, GAS GUNS, AND X-RAY DEVICES. CIVIL ENGINEERING PROGRAMS USE SHOCK TUBES AND HIGH EXPLOSIVES FOR SIMULATION OF NUCLEAR BLAST AND SHOCK. LASER SYSTEMS DEVELOPMENT USES LASER/OPTICS LABORATORIES AND TEST RANGES WITH LARGE, HIGH POWER DEVICES. A TECHNICAL LIBRARY, METALLURGY-AND METROLOGY LABORATORIES, A CDC-7600 AND TWO CDC-6600 COMPUTERS WITH REMOTE ACCESS TERMINALS AND MULTI-CHANNEL SENSING/RECORDING AND DATA REDUCTION SUPPORT ALL REQUIRING RDT/E PROGRAMS.

INSTALLATION: 6570 AEROSPACE MEDICAL RESEARCH LABORATORY WPAFB, OH

CDR, COL ROY L. DEHART

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RD&E	12.712	13.081
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	3.350	3.420
TOTAL ANNUAL LAB	16.062	16.501
TOTAL INHOUSE	8.186	8.473
TOTAL INHOUSE RD&E	4.836	5.053
ANNUAL OPERATING COST	0.650	0.700

PERSONNEL	PERSONNEL DATA (END OF FY 1976)			
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	133	22	60	73
CIVILIAN	158	28	97	61
TOTAL	291	50	157	134

ACRES	SPACE AND PROPERTY			COST (MILLION \$)		
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
	LAB	ADMIN	OTHER			
30	223.459	10.000	16.980	250.339	12.012	17.376

#### ...MISSION

ACCOMPLISH BEHAVIORAL AND BIOMEDICAL RESEARCH AND DEVELOPMENT TO DEFINE HUMAN TOLERANCE AND DEGRADATION OF HUMAN PERFORMANCE UNDER THE CONDITION OF ENVIRONMENTAL STRESS ASSOCIATED WITH AEROSPACE OPERATIONS AND PROVIDE SUPPORT TO SYSTEM DEVELOPMENT IN THE ABOVE AREAS.

#### ...CURRENT IMPORTANT PROGRAMS

DEFINE TOXIC HAZARDS ENVIR POLLUTION EFF OF MISSILE OPS-PROPELLANT TEST.  
 DEFINE EFFECT OF CREW PERF ON MANNED WEAPON SYSTEM EFFECTIVENESS.  
 DEV OPTICAL COUNTERMEASURE MECHANISMS FOR ADV DEV PROGRAM APPLICATIONS.  
 EFF OF OPERATIONAL NOISE AND VIBRATION ENVIRONMENTS ON AF PERSONNEL-OPS.  
 INV OF COMBINED STRESSES AND THEIR IMPACT ON HUMAN OPERATOR PERF METRICS

#### ...FUNCTIONS/EQUIPMENT/CAPABILITIES

HUMAN DECELERATION SYSTEM TO SIMULATE THE COMPLEX ACCELERATION ENVIRON ASSOCIATED WITH EJECTION AND CRASH LANDING. DYNAMIC ENVIRONMENT SIMULATOR - A SIX DEGREE OF FREEDOM MAN-RATED CENTRIFUGE USED TO SIMULATE SUSTAINED ACCELERATIONS SUCH AS THOSE ENCOUNTERED IN AIR COMBAT MANEUVERING. THOMAS DOMES-EIGHT ALTITUDE EXPOSURE CHAMBERS TO SIMULATE EXOTIC ARTIFICIAL ATMOSPHERIC CONDITIONS. HUMAN ENGINEERING SYSTEMS SIMULATOR FACILITY USED TO PERFORM REAL-TIME MAN-IN-THE-LOOP EXPERIMENTS AND DATA ANALYSIS. ANECHOIC AND RVRBERATION CHAMBERS TO ENABLE EXPERIMENTAL INVESTIGATIONS OF POTENTIALLY HAZARDOUS NOISE TO DETERMINE EFFECTS ON BODY FUNCTION AND PERFORMANCE. VIVARIUM-LABORATORY RESEARCH ANIMAL FACILITY. AEROSPACE SYSTEM OPS. VIVARIUM-LABORATORY RESEARCH ANIMAL FACILITY.

DEPARTMENT OF DEFENSE



INSTALLATION: ARMED FORCES RADIOBIOLOGY RES. INSTITUTE

BETHESDA, MD

CDR. COL LA WAYNE R. STROMBERG

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1976 (ACTUAL)	1977 (ACT + EST)
TOTAL RDT&E	4.332	5.100
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	1.466	1.763
TOTAL ANNUAL LAB	5.798	6.863
TOTAL INHOUSE	5.798	6.863
TOTAL INHOUSE RDT&E	4.332	5.100
ANNUAL OPERATING COST	1.320	1.330

PERSONNEL	PERSONNEL DATA (END OF FY 1976)				NON-PROF
	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF		
MILITARY	87	18	53		34
CIVILIAN	137	18	55		82
TOTAL	224	36	108		116

ACRES	SPACE AND PROPERTY (THOUSANDS OF SQUARE FEET)			COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
10	42.335	21.049	42.339	105.723	7.910	3.879

#### ...MISSION

THE MISSION OF AFRI SHALL BE TO CONDUCT SCIENTIFIC RESEARCH IN THE FIELD OF RADIOBIOLOGY AND RELATED MATTERS THAT ARE ESSENTIAL TO THE MEDICAL SUPPORT OF THE DEPARTMENT OF DEFENSE

#### ...CURRENT IMPORTANT PROGRAMS

EFFECTS OF IONIZING RADIATION ON BEHAVIOR  
ACUTE AND CHRONIC EFFECTS OF NON-IONIZING ELECTROMAGNETIC RADIATION  
DEVELOP-TEST-EVALUATE RADIOPHARMACEUTICALS TO DIAGNOSE AND TREAT DISEASE  
PROCESS. DETERMINE NEUROLOGIC AND BIOCHEMICAL CHANGES ASSOCIATED WITH  
RADIATION-IMPACT INJURY. STIMULATION OF MARROW RECOVERY POSTIRRADIATION.

#### ...FUNCTIONS/EQUIPMENT/CAPABILITIES

FUNCTIONS: OPERATE FACILITIES FOR CONDUCTING RADIOBIOLOGY RESEARCH AND DISSEMINATING RESULTS; CONDUCT ADVANCED TRAINING; OPERATE FACILITIES FOR PRODUCTION OF SHORT-LIVED RADIO ISOTOPES; AND PERFORM OTHER SUCH RESEARCH FUNCTIONS AS REQUIRED. MAJOR EQUIPMENT INCLUDES: PULSE AND STEADY STATE NUCLEAR REACTOR, 300,000-CURIE COBALT-60 IRRADIATOR, ELECTRON MICROWAVE LINEAR ACCELERATOR, X-RAY MACHINES WITH ASSOCIATED EXPOSURE ROOM COMPLEXES  
SUPPORT SERVICES INCLUDE: MEASUREMENT OF RADIATION FIELDS, PROVISION AND CARE OF LABORATORY ANIMALS, EQUIPMENT DESIGN AND FABRICATION ASSISTANCE, REAL-TIME DATA ACQUISITION SYSTEM, TELEVISION AND FILM DOCUMENTATION OF EXPERIMENTS, PERSONNEL AND ENVIRONMENTAL MONITORING, EDITORIAL ASSISTANCE IN REPORT PREPARATION, AND A LARGE TECHNICAL LIBRARY

APPENDIX I

DISESTABLISHMENT, ESTABLISHMENT OR CHANGES IN ORGANIZATION  
OR NAME \*

DEPARTMENT OF THE ARMY

AS OF OR PRIOR TO 1 JULY 1976

AIRCRAFT DEVELOPMENT  
TEST ACTIVITY  
Fort Rucker, AL

ESTABLISHED

ARMY MEDICAL R&D COMMAND  
Washington, D. C.

\*\* DELETED -- Does not meet  
report requirement

ARMY RESEARCH OFFICE  
Durham, NC

\*\* DELETED -- Does not meet  
report requirement

AVIATION BOARD  
Fort Rucker, AL

ESTABLISHED

AVIATION SYSTEMS TEST ACTIVITY  
Edwards AF Base, CA

AVIATION ENGINEERING FLIGHT  
ACTIVITY  
Edwards AF Base, CA

AVIATION TEST BOARD  
Fort Rucker, AL

DISESTABLISHED

JEFFERSON PROVING GROUND  
Madison, IN

DISESTABLISHED

MOBILITY EQUIPMENT R&D CENTER  
Fort Belvoir, VA

MOBILITY EQUIPMENT R&D COMMAND  
Fort Belvoir, VA

NATICK DEVELOPMENT CENTER  
Natick, Mass

NATICK R&D COMMAND  
Natick, Mass

DEPARTMENT OF THE NAVY

NAVY MEDICAL NEUROPSYCHIATRIC  
RESEARCH UNIT  
San Diego, CA

NAVAL HEALTH RESEARCH CENTER  
San Diego, CA

APPENDIX 1

DISESTABLISHMENT, ESTABLISHMENT OR CHANGES IN ORGANIZATION  
OR NAME (continued) \*

DEPARTMENT OF THE AIR FORCE

AS OF OR PRIOR TO 1 JULY 1976

AIR FORCE GEOPHYSICS LABORATORY  
Hanscomb AF Base, MA

ESTABLISHED

AIR FORCE SATELLITE CONTROL  
FACILITY  
Los Angeles, CA

\*\*DELETED. Does not meet  
report requirement

CAMBRIDGE RESEARCH LABORATORY  
Cambridge, MA

DISESTABLISHED

\* Changes since publication of Department of Defense In-House RDT&E  
Activities, 30 October 1975.

\*\* See paragraph one, Appendix 11.

## APPENDIX II

### Definitions

1. **IN-HOUSE RDT&E ACTIVITIES**--Those organizational entities engaged in performing work in any or all of the categories of research, development, test and evaluation. The RDT&E effort, however, should represent a minimum of 25 percent of the total effort of each entity reporting in order to be considered as an RDT&E activity.

2. **PROFESSIONALS**--Full-time government scientific and engineering personnel actively engaged in RDT&E activities. In the case of civilians this will include all those holding positions that fall into the following categories under the Civil Service Occupational Groups and Series of Classes, General Schedule:

150	440	665	871	1330
180	454	668	880	1340
190	457	680	881	1350
193	460	690	890	1360
401	470	701	892	1370
403	471	801	893	1372
405	482	806	894	1382
410	486	808	896	1384
413	487	810	1301	1386
414	601	819	1306	1510
430	602	830	1310	1515
434	635	840	1313	1520
435	644	850	1315	1529
436	660	855	1320	1530
437	662	861	1321	1540

Military professionals, both officer and enlisted, actively engaged in RDT&E activities should be identified with the functions described in the above-referenced civilian job series. Generally, these jobs are referenced in Department of Defense Occupational Conversion Tables DoD 1312.1-0, DoD 1312.1-E under DoD groups 5 and 6 of DoD 1312.1-0, and various other groups of DoD 1312.1-E, published under the provisions of DoD Instruction 1312.1. Lawyers, accountants, chaplains, social workers and educators should be excluded.

3. **TECHNICIANS**--Generally nonprofessionals working on an RDT&E project or program in support of a professional. In the case of civilians, it will include, but will not necessarily be limited to, those holding positions that fall into the following categories of the Civil Service Occupational Groups and Series of Classes, General Schedule:

181	645	683	1341
404	646	698	1371
421	647	699	1374
455	649	902	1410
458	650	317	1412
462	661	318	1521
621	667	356	1531
622	669	395	1541
625	681	311	
636	682	316	

Discretion will have to be exercised by each RDT&E activity in determining the number of military technicians. Generally, they should follow the guidelines established in defining civilian technicians and can be identified in DoD 1312.1-E.

4. Real Property Cost--Each reporting activity will be responsible for determining and reporting the cost of real property. This cost should be established in accordance with the guidelines and definitions in DoD Instruction 4165.14. This should also include the cost of installed equipment.

5. Equipment Cost--Each reporting activity will be responsible for determining and reporting the cost of personal property. This cost should be established in accordance with the guidelines and definitions in DoD Instruction 4165.14. This should also include the cost of installed equipment.

6. Space--The data to be furnished should include only walled and roofed building space. It should not include such things as parking lots, open storage areas, lean-tos, etc. The source of data may be the annual report submitted in compliance with the requirements of DoD Instruction 4165.14.

7. In-House Obligations--Obligations reported under this category are for activities performed, or to be performed, by the organizational entity. Their work is carried on directly by their own personnel. Particular care should be taken to include under in-house performance the cost of supplies and equipment essentially of an off-the-shelf nature that are procured for use in in-house research and development, plus such things as travel, publications, and other types of services in support of in-house functions and M.P.A. Excluded from the in-house total are expenses for planning and administering programs by DoD personnel of contracts and grants for out-of-house work and M.C.A.

8. Out-of-House Obligations--Obligations reported under this category are for activities performed, or to be performed, by other than the organizational entity. Out-of-house performers may include other departmental or DoD organizational entities, industrial firms, educational institutions, not-for-profit institutions, and private individuals. Included as out-of-house work are all expenses paid the out-of-house performers, as well as the expenses incurred in planning and administering these programs by personnel of the organizational entity. This would also include travel and other supporting services.

9. Annual Operating Cost--This should generally reflect the overhead cost of operating the laboratory or facility. It should include such things as costs of utilities, rents, janitorial services, guard and fire protection, support services such as supply personnel, printing, maintenance of buildings and grounds, etc. It should not include the salaries of direct labor personnel such as scientists, engineers, technicians, draftsmen, machinists, etc.

# APPENDIX III

## Selected Standard Abbreviations and Acronyms

AAM -- air-to-air missile	GCA -- ground-controlled approach
AAW -- antiair warfare	HF -- high-frequency
ADPE -- automatic data-processing equipment	IFF -- identification, friend or foe
AEC -- Atomic Energy Commission	IR -- infrared
AEDC -- Arnold Engineering Development Center	MPT -- military potential test
AFMDC -- Air Force Missile Development Center	NAF -- Naval Air Facility
AFSC -- Air Force Systems Command	NASA -- National Aeronautics and Space Administration
AFWET -- Air Force weapons effectiveness testing	NASC -- Naval Air Systems Command
AMC -- Army Materiel Command	NAVORD -- Naval Ordnance Systems Command
APG -- Aberdeen Proving Ground	NAVSHIP -- Naval Ship Systems Command
ARPA -- Advanced Research Projects Agency	NEMP -- nuclear electromagnetic propagation
ASW -- antisubmarine warfare	PI -- product improvement
AUS -- Army United States	POL -- petroleum oil, lubricants
BIS -- Board of Inspection and Survey	QA -- quality assurance
BW -- biological warfare	QMDO -- qualitative materiel development objective
CBR -- chemical, biological, radiological	QMR -- qualitative materiel requirement
CE -- Chief of Engineers, Army	RDT&E -- Research, development, test and evaluation
CG -- commanding general	RF -- radio frequency
CNO -- Chief of Naval Operations	RV -- reentry vehicle
COMEL -- communications electronics	SATS -- short airfield tactical support
DA -- Department of the Army	SDR -- small development requirement
DASA -- Defense Atomic Support Agency	SI -- Ship installation
DoD -- Department of Defense	SP -- self-propelled
DZ -- drop zone	ST -- service test
ECM -- electronic countermeasures	T&E -- test and evaluation
ECOM -- Electronics Command, Army	TOTO -- Tongue-of-the Ocean
ED -- engineering development	UDT -- underwater demolition team
EDT -- engineering development and test	ULMS -- Undersea Long-Range Missile System
EEG -- electroencephalogram	USATECOM -- U. S. Army Test and Evaluation Command
EKG -- electrocardiogram	UTTAS -- utility tactical transport aircraft system
ELINT -- electronic intelligence	USW -- undersea warfare
EMP -- electromagnetic propagation	UV -- ultraviolet
EMW -- electromagnetic warfare	V/STOL -- vertical/short takeoff and landing
EODC -- Explosive Ordnance Disposal Center	
ET -- engineering test	
EW -- electronic warfare	
FA -- field artillery	
FBM -- fleet ballistic missile	

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